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Data obtained through Sentinel are intended to complement other types of evidence such as preclinical studies, clinical trials, postmarket studies, and adverse event reports, all of which are used by FDA to inform regulatory decisions regarding medical product safety. The information contained in this report is provided as part of FDA's commitment to place knowledge acquired from Sentinel in the public domain as soon as possible. Any public health actions taken by FDA regarding products involved in Sentinel queries will continue to be communicated through existing channels.

FDA wants to emphasize that the fact that FDA has initiated a query involving a medical product and is reporting findings related to that query does not mean that FDA is suggesting health care practitioners should change their prescribing practices for the medical product or that patients taking the medical product should stop using it. Patients who have questions about the use of an identified medical product should contact their health care practitioners.

The following report contains a description of the request, request specifications, and results from the modular program run(s).

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Overview for Request: cder_mpl2p_wp025

Request ID: cder_mpl2p_wp025_nsdv_v01

Request Description: In this report we investigated the comparative risk of thromboembolic stroke, intracranial hemorrhage, gastrointestinal bleeding, and extracranial bleeding outcomes associated with use of dabigatran, rivaroxaban, and apixaban, three non-vitamin K antagonist oral anticoagulants (NOAC) using pairwise propensity score matched analysis, in individuals between the ages of 21 and 64 years with non-valvular atrial fibrillation in the Sentinel Distributed Database (SDD).

Sentinel Routine Querying Module: Cohort Identification and Descriptive Analysis (CIDA) module, version 8.0.3 and Propensity Score Analysis tools with additional programming.

Data Source: We distributed this request to 15 Data Partners on September 1, 2020 but we are reporting aggregated data from five Data Partners for which models converged across the three non-vitamin K antagonist oral anticoagulants (NOAC)-NOAC comparisons. The study period included data from October 19, 2010 to February 29, 2020. See Appendix A for a list of the latest dates of available data for each DP included in this report.

Study Design: We identified three cohorts of incident apixaban, dabigatran, and rivaroxaban users among individuals who were between the ages of 21 and 64 years with atrial fibrillation. We evaluated the occurrence of thromboembolic stroke (stroke), intracranial hemorrhage (ICH), major extracranial bleeding (MEB), and gastrointestinal bleeding (GIB) outcomes among these cohorts. We then conducted a pairwise propensity score analysis comparing each NOAC to the others (1:1 propensity score matching). This study used a retrospective new-user cohort design. This is a Type 2 analysis using the Propensity Score Analysis module in the Query Request Package (QRP) documentation.

Exposures: We defined exposures of interest as new use of standard dose rivaroxaban (20 mg once daily), dabigatran (150 mg twice daily), and apixaban (5 mg twice daily). The drugs were defined using National Drug Codes (NDCs). For a list of generic and brand names of medical products used to define exposures in this request, please see Appendix B.

Outcomes of Interest:

1. We defined stroke and ICH using International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) diagnosis codes flagged as a primary diagnosis in an inpatient encounter.
2. We defined MEB as:
 - a) one ICD-9-CM or ICD-10-CM diagnosis code from "Major Extracranial Bleeding - List 1" (Appendix C) as primary diagnosis from inpatient encounter AND no code from "Major Extracranial Bleeding - List 3"¹
 - OR
 - b) one ICD-9-CM or ICD-10-CM diagnosis code from "Major Extracranial Bleeding - List 2" (Appendix C) as primary diagnosis from inpatient encounter AND one ICD-9-CM or ICD-10-CM diagnosis code from "Major Extracranial Bleeding - List 1" as secondary or unspecified diagnosis from inpatient encounter on the same day AND no code from "Major Extracranial Bleeding - List 3"¹.
3. We defined GIB as:
 - a) one ICD-9-CM or ICD-10-CM diagnosis code from "Gastrointestinal Bleeding - List 1" (Appendix C) as primary diagnosis from inpatient encounter
 - OR
 - b) one ICD-9-CM or ICD-10-CM diagnosis code from "Gastrointestinal Bleeding - List 2" (Appendix C) as primary diagnosis from inpatient encounter AND one ICD-9-CM or ICD-10-CM diagnosis code from "Gastrointestinal Bleeding - List 1" as secondary or unspecified diagnosis from inpatient encounter on the same day.

We excluded users from the analysis if they had evidence of the outcome on the day of exposure initiation or in the 183 days preceding exposure initiation. For a list of ICD-9-CM and ICD-10-CM diagnosis codes used to define the outcomes, please see Appendix C.

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Cohort Eligibility Criteria: We required patients included in the cohorts to be enrolled in health plans with both medical and drug coverage for at least 183 days prior to the index exposure, during which gaps in coverage of up to 45 days were allowed and treated as continuous enrollment. Cohorts were further restricted to patients between the ages of 21 and 64 years. New use was defined as no use of apixaban, dabigatran, edoxaban, rivaroxaban, or warfarin in the 183 days period preceding the index dispensing. We included patients with evidence of atrial fibrillation in the 183 days preceding and including index date. We excluded patients from the cohort if they had evidence of dialysis, kidney replacement, deep vein thrombosis, pulmonary embolism, joint replacement, mitral stenosis, valve replacement or valve repair in the 183 days prior to and including the index date. Dialysis was only assessed in outpatient care settings. Additionally, we excluded patients from the analysis if they had evidence of any other NOAC or an institutional stay encounter on their index date. Inclusion and exclusion criteria were defined using NDCs, ICD-9-CM, ICD-10-CM, International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) and Current Procedural Terminology, Fourth Edition (CPT-4) codes. For a list of generic and brand names of medical products used to define cohort eligibility, please see Appendix D. For a list of diagnosis and procedure codes used to define cohort eligibility, please see Appendix E.

Follow-up: We determined follow-up time based on the length of the exposure episodes and censored upon prespecified criteria met. We created exposure episodes using outpatient pharmacy dispensing data. We bridged together exposure episodes less than 3 days apart and added 3 days at the end of each exposure episodes to create continuous treatment episodes. Overlapping days supply of two dispensings were stockpiled up to 33% of the first dispensings days supply. We censored all exposure episodes upon initiation of any other NOAC, low dose of the index NOAC, warfarin or edoxaban dispensing, kidney transplant, dialysis, institutional stay encounter, major extracranial bleed, gastrointestinal bleed, intracranial hemorrhage, or ischemic stroke. Follow-up began on the day after exposure initiation and continued until the first occurrence of any of the following: 1) outcome occurrence; 2) requester-defined censoring criteria; 3) disenrollment; 4) recorded death; 5) end of exposure episode; 6) end of query period; or 7) end of available data. Only the first valid exposure episode that occurred during the study period was included per patient. Censoring criteria was defined using ICD-9-CM, ICD-10-CM, ICD-10-PCS and CPT-4 diagnosis and procedure codes. Please see Appendices C and F for a list of diagnosis and procedure codes used to define censoring criteria.

Baseline Covariates: Please refer to Appendices G, H, and J for a list of generic names of medical products, diagnosis and procedure codes, and evaluation windows used to define covariates.

Propensity Score Estimation: For each of the 3 NOAC-NOAC comparison, we fit a logistic regression model separately for each of the 4 outcomes (stroke, MEB, GIB, ICH) to estimate the propensity score (PS) based on potential confounders outlined in Appendix J. The matching ratio for the PS was 1:1 and the matching caliper was 0.05 of PS. Patients in the exposed and comparator cohorts were nearest neighbor matched without replacement, meaning that each comparator patient was matched one time, at most, to an exposed patient. For each comparison, we used risk set-based analysis to estimate the adjusted hazard ratio and 95% confidence intervals for the unmatched analyses and unconditional and conditional matched analyses. Subgroup analyses for effect estimation included prior antiplatelet use in 183 days, age categories, sex, CHA₂DS₂-VASc² and HAS-BLED³ score categories.

See Appendices I.1-J for the specifications or parameters and covariates used in this request.

Limitations: As with all observational studies, this evaluation was limited in its ability to control for all sources of potential bias. Algorithms used to define exposures, outcomes, inclusion and exclusion criteria, and covariates are imperfect and may be misclassified. Therefore, data should be interpreted with this limitation in mind.

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Notes: Please contact the Sentinel Operations Center (info@sentinelssystem.org) for questions and to provide comments/suggestions for future enhancements to this document. For more information on Sentinel's routine querying modules, please refer to the documentation (<https://dev.sentinelssystem.org/projects/SENTINEL/repos/sentinel-routine-querying-tooldocumentation/browse>).

¹Cunningham AW, Stein CM, Chung CP, Daugherty JR, Smalley WE, Ray WA. An automated database definition for serious bleeding due to oral anticoagulant use. *Pharmacoepidemiol Drug Saf.* 2011; 20:560–566

²CHA2DS₂-VaSc: Lip, G.Y., Nieuwlaat, R., Pisters, R., Lane, D.A. and Crijns, H.J., 2010. Refining clinical risk stratification for predicting stroke and thromboembolism in atrial fibrillation using a novel risk factor-based approach: the euro heart survey on atrial fibrillation. *Chest*, 137(2), pp.263-272.

³HAS-BLED: Pisters, R., Lane, D.A., Nieuwlaat, R., De Vos, C.B., Crijns, H.J. and Lip, G.Y., 2010. A novel user-friendly score (HAS-BLED) to assess 1-year risk of major bleeding in patients with atrial fibrillation: the Euro Heart Survey. *Chest*, 138(5), pp.1093-1100

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**Glossary of Terms for Analyses Using
Cohort Identification and Descriptive Analysis (CIDA) Module***

Amount Supplied - number of units (pills, tablets, vials) dispensed. Net amount per NDC per dispensing.

Blackout Period - number of days at the beginning of a treatment episode that events are to be ignored. If an event occurs during the blackout period, the episode is excluded.

Care Setting - type of medical encounter or facility where the exposure, event, or condition code was recorded. Possible care settings include: Inpatient Hospital Stay (IP), Non-Acute Institutional Stay (IS), Emergency Department (ED), Ambulatory Visit (AV), and Other Ambulatory Visit (OA). For laboratory results, possible care settings include: Emergency Department (E), Home (H), Inpatient (I), Outpatient (O), or Unknown or Missing (U). The Care Setting, along with the Principal Diagnosis Indicator (PDX), forms the Care Setting/PDX parameter.

Ambulatory Visit (AV) - includes visits at outpatient clinics, same-day surgeries, urgent care visits, and other same-day ambulatory hospital encounters, but excludes emergency department encounters.

Emergency Department (ED) - includes ED encounters that become inpatient stays (in which case inpatient stays would be a separate encounter). Excludes urgent care visits.

Inpatient Hospital Stay (IP) - includes all inpatient stays, same-day hospital discharges, hospital transfers, and acute hospital care where the discharge is after the admission date.

Non-Acute Institutional Stay (IS) - includes hospice, skilled nursing facility (SNF), rehab center, nursing home, residential, overnight non-hospital dialysis and other non-hospital stays.

Other Ambulatory Visit (OA) - includes other non overnight AV encounters such as hospice visits, home health visits, skilled nursing facility visits, other non-hospital visits, as well as telemedicine, telephone and email consultations.

Charlson/Elixhauser Combined Comorbidity Score - calculated based on comorbidities observed during a requester-defined window around the exposure episode start date (e.g., in the 183 days prior to index).

Code Days - the minimum number of times the diagnosis must be found during the evaluation period in order to fulfill the algorithm to identify the corresponding patient characteristic.

Cohort Definition (drug/exposure) - indicates how the cohort will be defined: 01: Cohort includes only the first valid treatment episode during the query period; 02: Cohort includes all valid treatment episodes during the query period; 03: Cohort includes all valid treatment episodes during the query period until an event occurs.

Computed Start Marketing Date - represents the first observed dispensing date among all valid users within a GROUP (scenario) within each Data Partner site.

Days Supplied - number of days supplied for all dispensings in qualifying treatment episodes.

Eligible Members - number of members eligible for an incident treatment episode (defined by the drug/exposure and event washout periods) with drug and medical coverage during the query period.

Enrollment Gap - number of days allowed between two consecutive enrollment periods without breaking a "continuously enrolled" sequence.

Episodes - treatment episodes; length of episode is determined by days supplied in one dispensing or consecutive dispensings bridged by the episode gap.

Episode Gap - number of days allowed between two (or more) consecutive exposures (dispensings/procedures) to be considered the same treatment episode.

Event Deduplication - specifies how events are counted by the Modular Program (MP) algorithm: 0: Counts all occurrences of a health outcome of interest (HOI) during an exposure episode; 1: de-duplicates occurrences of the same HOI code and code type on the same day; 2: de-duplicates occurrences of the same HOI group on the same day (e.g., de-duplicates at the group level).

Exposure Episode Length - number of days after exposure initiation that is considered "exposed time."

Exposure Extension Period - number of days post treatment period in which the outcomes/events are counted for a treatment episode. Extensions are added after any episode gaps have been bridged.

Lookback Period - number of days wherein a member is required to have evidence of pre-existing condition (diagnosis/procedure/drug dispensing).

Maximum Episode Duration - truncates exposure episodes after a requester-specified number of exposed days. Applied after any gaps are bridged and extension days added to the length of the exposure episode.

Member-Years - sum of all days of enrollment with medical and drug coverage in the query period preceded by an exposure washout period all divided by 365.25.

Minimum Days Supplied - specifies a minimum number of days in length of the days supplied for the episode to be considered.

Minimum Episode Duration - specifies a minimum number of days in length of the episode for it to be considered. Applied after any gaps are bridged and extension days added to the length of the exposure episode.

Monitoring Period - used to define time periods of interest for both sequential analysis and simple cohort characterization requests.

Principal Diagnosis (PDX) - diagnosis or condition established to be chiefly responsible for admission of the patient to the hospital. 'P' = principal diagnosis, 'S' = secondary diagnosis, 'X' = unspecified diagnosis, '.' = blank. Along with the Care Setting values, forms the Caresetting/PDX parameter.

Query Period - period in which the modular program looks for exposures and outcomes of interest.

Switch Evaluation Step Value - value used to differentiate evaluation step. Each switch pattern can support up to 2 evaluation steps (0 = switch pattern evaluation start; 1 = first evaluation; 2 = second evaluation).

Switch Gap Inclusion Indicator - indicator for whether gaps in treatment episodes that are included in a switch episode will be counted as part of the switch episode duration.

Switch Pattern Cohort Inclusion Date - indicates which date to use for inclusion into the switch pattern cohort of interest as well as optionally as the index date of the treatment episode initiating the switch pattern. Valid options are the product approval date, product marketing date, other requester defined date, or computed start marketing date.

Switch Pattern Cohort Inclusion Strategy - indicates how the switch pattern cohort inclusion date will be used: 01: used only as a switch cohort entry date. First treatment episode dispensing date is used as index for computing time to first switch; 02: used as switch cohort entry date and as initial switch step index date for computing time to first switch.

Treatment Episode Truncation Indicator - indicates whether the exposure episode will be truncated at the occurrence of a requester-specified code.

Washout Period (drug/exposure) - number of days a user is required to have no evidence of prior exposure (drug dispensing/procedure) and continuous drug and medical coverage prior to an incident treatment episode.

Washout Period (event/outcome) - number of days a user is required to have no evidence of a prior event (procedure/diagnosis) and continuous drug and medical coverage prior to an incident treatment episode.

Years at Risk - number of days supplied plus any episode gaps and exposure extension periods all divided by 365.25.

*all terms may not be used in this report

Glossary of Terms for Analyses Using Propensity Score Analysis (PSA) Tool*

Covariate - requester defined binary variable to include in the propensity score estimation model (e.g., diabetes, heart failure, etc.) during requester-defined lookback period. Requester may also choose to add any of the following categorical, continuous, or count metrics to the propensity score estimation model:

1. Age (continuous)
2. Sex
3. Time period (i.e., monitoring period for sequential analyses)
4. Year of exposure
5. Comorbidity score
6. Medical utilization – number of inpatient stays
7. Medical utilization – number of institutional stays
8. Medical utilization – number of emergency department visits
9. Medical utilization – number of outpatient visits
10. Health care utilization – number of other ambulatory encounters (e.g., telemedicine, email consults)
11. Drug utilization – number of dispensings
12. Drug utilization – number of unique generics dispensed
13. Drug Utilization – number of unique drug classes dispensed

Covariate Evaluation Window - specified number of days relative to index date to evaluate the occurrence of covariates of interest. Note: members are required to have continuous enrollment during the covariate evaluation window, regardless of the value included in the "Continuous enrollment before exposure" field.

Individual Level Data Return - program may return individual-level, de-identified datasets to the Sentinel Operations Center (SOC). While the datasets contain a single row per patient for each specified analysis, patient identifiers such as a patient ID are not included in the output. Individual-level datasets are returned to the SOC, aggregated, and used to calculate effect estimates via Cox (proportional hazards) regression.

Mahalanobis Distance - provides a measure of balance across all variables while accounting for their correlation.

Matching Caliper - maximum allowed difference in propensity scores between treatment and control patients. Requester may select any caliper (e.g., 0.01, 0.025, and 0.05).

Matching Ratio - patients in exposed and comparator groups are nearest neighbor matched by a 1:1 or 1:n (up to 10) matching ratio.

Matched Conditional and Unconditional Analysis - in a conditional matched analysis, a Cox model, stratified by Data Partner site and matched set, is run on the matched population. This can be done for both the both 1:1 and 1:n matched cohorts. In an unconditional analysis, a Cox model, stratified by Data Partner site only, is run on the matched population. This can be done for the 1:1 matched cohort only.

Propensity Score Stratification - option to stratify propensity scores based on requester-defined percentiles in the unmatched population. In a stratified analysis, a Cox model, stratified by Data Partner site, is run on the stratified population. Note that all patients identified in exposure and comparator cohorts are used in the analysis.

PSM Tool - performs effect estimation by comparing exposure propensity-score matched parallel new user cohorts. Propensity score estimation and matching are conducted within each Sentinel Data Partner site via distributed programming code; data are returned to the SOC, aggregated, and used to calculate effect estimates.

Glossary of Terms for Analyses Using Propensity Score Analysis (PSA) Tool*

Risk-set Level Data Return - alternative to the patient-level data return approach. In this approach, the PSM tool will produce de-identified, risk-set level datasets instead of or in addition to individual-level output. Whereas each observation in the patient-level datasets represents one patient in the cohort, each observation in the risk set dataset represents one event. Risk sets are created at the Data Partner site, returned to the SOC, aggregated, and used to calculate effect estimates via case-centered logistic regression.

Subgroup Analysis - may be conducted using any requester-defined covariates. Subgroup analyses may be performed in the

Zero Cell Correction - indicator for whether to screen variables with a zero correction added to each cell in the confounder/outcome 2x2 table. Recommended when the number of exposed outcomes is fewer than 150.

*all terms may not be used in this report

Table 1a. Cohort of New Initiators of Rivaroxaban and Dabigatran in the Sentinel Distributed Database (SDD) between October 2010 and February 2020 (Unmatched, Aggregated), Ratio: 1:1, Caliper: 0.05

Characteristic ¹	Medical Product				Covariate Balance	
	Rivaroxaban		Dabigatran		Absolute Difference	Standardize d
	Number	Percent	Number	Percent		
Patients	46,957	100.0%	19,735	100.0%	-	-
Demographics	Mean	Standard Deviation	Mean	Standard Deviation		
Mean Age (years)	56.3	7.4	56.2	7.3	0.048	0.006
Age (years)	Number	Percent	Number	Percent		
21-49	7,914	16.9%	3,406	17.3%	-0.405	-0.011
50-64	39,043	83.1%	16,329	82.7%	0.405	0.011
Sex						
Female	11,903	25.3%	4,580	23.2%	2.141	0.050
Male	35,054	74.7%	15,155	76.8%	-2.141	-0.050
Race ²						
American Indian or Alaska Native	40	0.1%	22	0.1%	-0.026	-0.008
Asian	125	0.3%	62	0.3%	-0.048	-0.009
Black or African American	869	1.9%	254	1.3%	0.564	0.045
Native Hawaiian or Other Pacific Islander	43	0.1%	10	0.1%	0.041	0.015
Unknown	39,384	83.9%	16,503	83.6%	0.249	0.007
White	6,496	13.8%	2,884	14.6%	-0.780	-0.022
Ethnicity						
Hispanic Origin	283	0.6%	104	0.5%	0.076	0.010
Year						
2010	-	0.0%	479	2.4%	-2.427	-
2011	48	0.1%	6,820	34.6%	-34.456	-1.022
2012	2,698	5.7%	4,602	23.3%	-17.573	-0.515
2013	5,725	12.2%	2,370	12.0%	0.183	0.006
2014	7,220	15.4%	1,504	7.6%	7.755	0.245
2015	6,605	14.1%	1,040	5.3%	8.796	0.301
2016	6,370	13.6%	1,255	6.4%	7.206	0.242
2017	6,743	14.4%	854	4.3%	10.033	0.350
2018	6,267	13.3%	547	2.8%	10.575	0.396
2019	5,018	10.7%	257	1.3%	9.384	0.403
2020	263	0.6%	7	0.0%	0.525	0.096
CHA₂DS₂VaSc	Mean	Standard Deviation	Mean	Standard Deviation		
Mean	1.7	1.4	1.6	1.3	0.100	0.073
	Number	Percent	Number	Percent		
0	8,747	18.6%	4,031	20.4%	-1.798	-0.045
1	16,216	34.5%	6,940	35.2%	-0.632	-0.013
2	9,535	20.3%	3,902	19.8%	0.534	0.013
3	6,311	13.4%	2,766	14.0%	-0.576	-0.017

Table 1a. Cohort of New Initiators of Rivaroxaban and Dabigatran in the Sentinel Distributed Database (SDD) between October 2010 and February 2020 (Unmatched, Aggregated), Ratio: 1:1, Caliper: 0.05

Characteristic ¹	Medical Product				Covariate Balance	
	Rivaroxaban		Dabigatran		Absolute Difference	Standardize d
	Number	Percent	Number	Percent		
4	4,065	8.7%	1,454	7.4%	1.289	0.048
5	1,618	3.4%	477	2.4%	1.029	0.061
>= 6	465	1.0%	165	0.8%	0.154	0.016
HAS-BLED	Standard		Standard			
Mean	Mean	Deviation	Mean	Deviation		
	1.2	0.9	1.1	0.8	0.065	0.076
	Number	Percent	Number	Percent		
0	10,799	23.0%	4,867	24.7%	-1.664	-0.039
1	21,938	46.7%	9,562	48.5%	-1.733	-0.035
2	10,990	23.4%	4,182	21.2%	2.214	0.053
3	2,724	5.8%	964	4.9%	0.916	0.041
>= 4	506	1.1%	160	0.8%	0.267	0.028
Recorded History of:						
Acute myocardial infarction (0-30 days)	630	1.3%	205	1.0%	0.303	0.028
Acute myocardial infarction (31-183 days)	334	0.7%	94	0.5%	0.235	0.031
Cardioablation	2,212	4.7%	1,255	6.4%	-1.649	-0.072
Cardioversion	7,979	17.0%	3,348	17.0%	0.027	0.001
Coronary revascularization	3,087	6.6%	1,238	6.3%	0.301	0.012
Diabetes	11,932	25.4%	4,905	24.9%	0.556	0.013
Heart failure (hospitalized)	5,680	12.1%	2,114	10.7%	1.384	0.044
Heart failure (outpatient)	5,801	12.4%	2,325	11.8%	0.573	0.018
Hypercholesterolemia	11,729	25.0%	5,231	26.5%	-1.528	-0.035
Hypertension	32,762	69.8%	13,385	67.8%	1.947	0.042
Kidney failure (acute)	2,025	4.3%	617	3.1%	1.186	0.063
Kidney failure (chronic)	1,998	4.3%	702	3.6%	0.698	0.036
Nicotine dependency	10,186	21.7%	3,138	15.9%	5.792	0.149
Obesity	14,440	30.8%	4,377	22.2%	8.573	0.195
Other ischemic heart disease	11,681	24.9%	4,928	25.0%	-0.095	-0.002
Other medical conditions	3,735	8.0%	1,387	7.0%	0.926	0.035
Peptic ulcer disease	111	0.2%	44	0.2%	0.013	0.003
Prior hospitalized bleeding	141	0.3%	69	0.3%	-0.049	-0.009
Stroke (0-30 days)	474	1.0%	221	1.1%	-0.110	-0.011
Stroke (31-183 days)	227	0.5%	100	0.5%	-0.023	-0.003
Transient ischemic attack	1,387	3.0%	637	3.2%	-0.274	-0.016
History of Use:						
ACEI/ARB	22,799	48.6%	9,380	47.5%	1.023	0.020
Amiodarone	4,258	9.1%	1,720	8.7%	0.352	0.012
Anti-coagulant (injectable)	4,814	10.3%	1,412	7.2%	3.097	0.110
Antiarrhythmics	8,999	19.2%	4,326	21.9%	-2.756	-0.068
Antiplatelets	4,400	9.4%	1,555	7.9%	1.491	0.053
Beta blockers	32,417	69.0%	13,346	67.6%	1.409	0.030
Calcium channel blockers	15,897	33.9%	6,786	34.4%	-0.531	-0.011
Digoxin	3,469	7.4%	2,143	10.9%	-3.471	-0.121

Table 1a. Cohort of New Initiators of Rivaroxaban and Dabigatran in the Sentinel Distributed Database (SDD) between October 2010 and February 2020 (Unmatched, Aggregated), Ratio: 1:1, Caliper: 0.05

Characteristic ¹	Medical Product				Covariate Balance	
	Rivaroxaban		Dabigatran		Absolute Difference	Standardize d
	Number	Percent	Number	Percent		
Diuretics (loop)	7,203	15.3%	2,859	14.5%	0.853	0.024
Diuretics (potassium sparing)	3,214	6.8%	1,285	6.5%	0.333	0.013
Diuretics (thiazide)	9,383	20.0%	3,889	19.7%	0.276	0.007
Dronedarone	1,602	3.4%	1,444	7.3%	-3.905	-0.174
Estrogen	1,106	2.4%	483	2.4%	-0.092	-0.006
Fibrates	1,890	4.0%	980	5.0%	-0.941	-0.045
H2-antagonist	989	2.1%	359	1.8%	0.287	0.021
Insulin	2,808	6.0%	1,124	5.7%	0.284	0.012
Metformin	7,313	15.6%	2,802	14.2%	1.376	0.039
NSAIDs	7,201	15.3%	2,932	14.9%	0.478	0.013
Nitrates	2,022	4.3%	846	4.3%	0.019	0.001
Other diabetes medications	3,090	6.6%	1,279	6.5%	0.100	0.004
Proton pump inhibitors	8,608	18.3%	3,398	17.2%	1.114	0.029
SSRI antidepressants	5,179	11.0%	2,012	10.2%	0.834	0.027
Statins	18,939	40.3%	7,994	40.5%	-0.174	-0.004
Sulfonyreas	2,792	5.9%	1,229	6.2%	-0.282	-0.012
Health Service Utilization Intensity:	Mean	Standard Deviation	Mean	Standard Deviation		
Mean number of ambulatory (AV) encounters	8.7	8.1	8.6	7.8	0.110	0.014
Mean number of emergency room (ED) encounters	0.6	1.1	0.5	0.9	0.091	0.089
Mean number of inpatient hospital (IP) encounters	0.4	0.6	0.4	0.6	-0.016	-0.024
	Number	Percent	Number	Percent		
No ED encounters (0-30 days)	34,059	72.5%	14,917	75.6%	-3.054	-0.070
At least 1 ED encounter (0-30 days)	12,898	27.5%	4,818	24.4%	3.054	0.070
At least 2 ED encounters (0-30 days)	5,545	11.8%	2,258	11.4%	0.367	0.011
No ED encounters (31-183 days)	38,988	83.0%	16,787	85.1%	-2.033	-0.056
At least 1 ED encounter (31-183 days)	7,969	17.0%	2,948	14.9%	2.033	0.056
At least 2 ED encounters (31-183 days)	2,939	6.3%	1,070	5.4%	0.837	0.036
	Mean	Standard Deviation	Mean	Standard Deviation		
Mean number of generics	7.8	4.6	7.7	4.6	0.111	0.024

¹Covariates in blue show a standardized difference greater than 0.1

²Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete

Table 1b. Cohort of New Initiators of Rivaroxaban and Dabigatran in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020 (Matched, Aggregated), Ratio: 1:1, Caliper: 0.05

Characteristic ¹	Medical Product				Covariate Balance	
	Rivaroxaban		Dabigatran		Absolute Difference	Standardized Difference
	Number	Percent	Number	Percent		
Patients	19,478	41.5%	19,478	98.7%	-	-
Demographics	Mean	Standard Deviation	Mean	Standard Deviation		
Mean Age (years)	56.2	7.5	56.2	7.3	-0.007	-0.001
Age (years)	Number	Percent	Number	Percent		
21-49	3,291	16.9%	3,364	17.3%	-0.375	-0.010
50-64	16,187	83.1%	16,114	82.7%	0.375	0.010
Sex						
Female	4,545	23.3%	4,525	23.2%	0.103	0.002
Male	14,933	76.7%	14,953	76.8%	-0.103	-0.002
Race ²						
American Indian or Alaska Native	23	0.1%	21	0.1%	0.010	0.003
Asian	55	0.3%	60	0.3%	-0.026	-0.005
Black or African American	238	1.2%	250	1.3%	-0.062	-0.006
Native Hawaiian or Other Pacific Islander	12	0.1%	10	0.1%	0.010	0.004
Unknown	16,331	83.8%	16,302	83.7%	0.149	0.004
White	2,819	14.5%	2,835	14.6%	-0.082	-0.002
Ethnicity						
Hispanic Origin	111	0.6%	103	0.5%	0.041	0.006
Year						
2010	-	0.0%	470	2.4%	-2.413	-
2011	23	0.1%	6,820	35.0%	-34.896	-1.032
2012	1,412	7.2%	4,602	23.6%	-16.377	-0.465
2013	2,737	14.1%	2,370	12.2%	1.884	0.056
2014	3,269	16.8%	1,504	7.7%	9.062	0.279
2015	2,748	14.1%	1,040	5.3%	8.769	0.299
2016	2,579	13.2%	1,255	6.4%	6.797	0.230
2017	2,468	12.7%	854	4.4%	8.286	0.300
2018	2,347	12.0%	547	2.8%	9.241	0.358
2019	1,797	9.2%	257	1.3%	7.906	0.359
2020	98	0.5%	7	0.0%	0.467	0.090
CHA₂DS₂VaSc	Mean	Standard Deviation	Mean	Standard Deviation		
Mean	1.6	1.4	1.6	1.3	0.012	0.009
	Number	Percent	Number	Percent		
0	3,979	20.4%	3,983	20.4%	-0.021	-0.001
1	6,808	35.0%	6,864	35.2%	-0.288	-0.006
2	3,794	19.5%	3,846	19.7%	-0.267	-0.007
3	2,794	14.3%	2,718	14.0%	0.390	0.011

Table 1b. Cohort of New Initiators of Rivaroxaban and Dabigatran in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020 (Matched, Aggregated), Ratio: 1:1, Caliper: 0.05

Characteristic ¹	Medical Product				Covariate Balance	
	Rivaroxaban		Dabigatran		Absolute Difference	Standardized Difference
	Number	Percent	Number	Percent		
4	1,458	7.5%	1,433	7.4%	0.128	0.005
5	483	2.5%	472	2.4%	0.056	0.004
>= 6	162	0.8%	162	0.8%	0.000	0.000
HAS-BLED						
Mean	1.1	0.8	1.1	0.8	0.000	0.000
0	4,839	24.8%	4,812	24.7%	0.139	0.003
1	9,388	48.2%	9,444	48.5%	-0.288	-0.006
2	4,140	21.3%	4,114	21.1%	0.133	0.003
3	965	5.0%	949	4.9%	0.082	0.004
>= 4	146	0.7%	159	0.8%	-0.067	-0.008
Recorded History of:						
Acute myocardial infarction (0-30 days)	218	1.1%	204	1.0%	0.072	0.007
Acute myocardial infarction (31-183 days)	98	0.5%	93	0.5%	0.026	0.004
Cardioablation	1,128	5.8%	1,170	6.0%	-0.216	-0.009
Cardioversion	3,319	17.0%	3,284	16.9%	0.180	0.005
Coronary revascularization	1,251	6.4%	1,211	6.2%	0.205	0.008
Diabetes	4,884	25.1%	4,823	24.8%	0.313	0.007
Heart failure (hospitalized)	2,083	10.7%	2,082	10.7%	0.005	0.000
Heart failure (outpatient)	2,281	11.7%	2,285	11.7%	-0.021	-0.001
Hypercholesterolemia	5,205	26.7%	5,127	26.3%	0.400	0.009
Hypertension	13,200	67.8%	13,209	67.8%	-0.046	-0.001
Kidney failure (acute)	597	3.1%	615	3.2%	-0.092	-0.005
Kidney failure (chronic)	695	3.6%	692	3.6%	0.015	0.001
Nicotine dependency	3,096	15.9%	3,116	16.0%	-0.103	-0.003
Obesity	4,362	22.4%	4,351	22.3%	0.056	0.001
Other ischemic heart disease	4,870	25.0%	4,822	24.8%	0.246	0.006
Other medical conditions	1,384	7.1%	1,360	7.0%	0.123	0.005
Peptic ulcer disease	46	0.2%	43	0.2%	0.015	0.003
Prior hospitalized bleeding	68	0.3%	64	0.3%	0.021	0.004
Stroke (0-30 days)	228	1.2%	218	1.1%	0.051	0.005
Stroke (31-183 days)	99	0.5%	96	0.5%	0.015	0.002
Transient ischemic attack	641	3.3%	623	3.2%	0.092	0.005
History of Use:						
ACEI/ARB	9,268	47.6%	9,247	47.5%	0.108	0.002
Amiodarone	1,682	8.6%	1,694	8.7%	-0.062	-0.002
Anti-coagulant (injectable)	1,420	7.3%	1,403	7.2%	0.087	0.003
Antiarrhythmics	4,227	21.7%	4,231	21.7%	-0.021	-0.000
Antiplatelets	1,533	7.9%	1,520	7.8%	0.067	0.002
Beta blockers	13,198	67.8%	13,162	67.6%	0.185	0.004
Calcium channel blockers	6,648	34.1%	6,681	34.3%	-0.169	-0.004
Digoxin	2,082	10.7%	2,057	10.6%	0.128	0.004

Table 1b. Cohort of New Initiators of Rivaroxaban and Dabigatran in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020 (Matched, Aggregated), Ratio: 1:1, Caliper: 0.05

Characteristic ¹	Medical Product				Covariate Balance	
	Rivaroxaban		Dabigatran		Absolute Difference	Standardized Difference
	Number	Percent	Number	Percent		
Diuretics (loop)	2,763	14.2%	2,800	14.4%	-0.190	-0.005
Diuretics (potassium sparing)	1,199	6.2%	1,256	6.4%	-0.293	-0.012
Diuretics (thiazide)	3,885	19.9%	3,831	19.7%	0.277	0.007
Dronedarone	1,267	6.5%	1,299	6.7%	-0.164	-0.007
Estrogen	498	2.6%	472	2.4%	0.133	0.009
Fibrates	937	4.8%	953	4.9%	-0.082	-0.004
H2-antagonist	350	1.8%	348	1.8%	0.010	0.001
Insulin	1,149	5.9%	1,102	5.7%	0.241	0.010
Metformin	2,793	14.3%	2,763	14.2%	0.154	0.004
NSAIDs	2,890	14.8%	2,885	14.8%	0.026	0.001
Nitrates	839	4.3%	816	4.2%	0.118	0.006
Other diabetes medications	1,276	6.6%	1,264	6.5%	0.062	0.002
Proton pump inhibitors	3,349	17.2%	3,344	17.2%	0.026	0.001
SSRI antidepressants	1,981	10.2%	1,984	10.2%	-0.015	-0.001
Statins	7,883	40.5%	7,869	40.4%	0.072	0.001
Sulfonyureas	1,218	6.3%	1,206	6.2%	0.062	0.003
Health Service Utilization Intensity:	Mean	Standard Deviation	Mean	Standard Deviation		
Mean number of ambulatory (AV) encounters	8.6	8.0	8.5	7.8	0.029	0.004
Mean number of emergency room (ED) encounters	0.5	1.0	0.5	0.9	0.020	0.021
Mean number of inpatient hospital (IP) encounters	0.4	0.7	0.4	0.6	0.000	0.000
	Number	Percent	Number	Percent		
No ED encounters (0-30 days)	14,703	75.5%	14,722	75.6%	-0.098	-0.002
At least 1 ED encounter (0-30 days)	4,775	24.5%	4,756	24.4%	0.098	0.002
At least 2 ED encounters (0-30 days)	2,260	11.6%	2,213	11.4%	0.241	0.008
No ED encounters (31-183 days)	16,563	85.0%	16,597	85.2%	-0.175	-0.005
At least 1 ED encounter (31-183 days)	2,915	15.0%	2,881	14.8%	0.175	0.005
At least 2 ED encounters (31-183 days)	1,067	5.5%	1,044	5.4%	0.118	0.005
	Mean	Standard Deviation	Mean	Standard Deviation		
Mean number of generics	7.7	4.6	7.7	4.5	0.014	0.003

¹Covariates in blue show a standardized difference greater than 0.1

²Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete

Table 1c. Cohort of New Initiators of Rivaroxaban and Apixaban in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020 (Unmatched, Aggregated), Ratio: 1:1, Caliper: 0.05

Characteristic ¹	Medical Product				Covariate Balance	
	Rivaroxaban		Apixaban		Absolute Difference	Standardized Difference
	Number	Percent	Number	Percent		
Patients	47,405	100.0%	59,652	100.0%	-	-
Demographics	Mean	Standard Deviation	Mean	Standard Deviation		
Mean Age (years)	56.3	7.4	56.9	7.0	-0.648	-0.090
Age (years)	Number	Percent	Number	Percent		
21-49	7,982	16.8%	8,905	14.9%	1.910	0.052
50-64	39,423	83.2%	50,747	85.1%	-1.910	-0.052
Sex						
Female	11,987	25.3%	17,441	29.2%	-3.952	-0.089
Male	35,418	74.7%	42,211	70.8%	3.952	0.089
Race ²						
American Indian or Alaska Native	40	0.1%	53	0.1%	-0.004	-0.002
Asian	129	0.3%	143	0.2%	0.032	0.006
Black or African American	881	1.9%	1,335	2.2%	-0.380	-0.027
Native Hawaiian or Other Pacific Islander	45	0.1%	61	0.1%	-0.007	-0.002
Unknown	39,764	83.9%	49,012	82.2%	1.718	0.046
White	6,546	13.8%	9,048	15.2%	-1.359	-0.039
Ethnicity						
Hispanic Origin	283	0.6%	342	0.6%	0.024	0.003
Year						
2010	-	0.0%	-	0.0%	0.000	-
2011	49	0.1%	-	0.0%	0.103	-
2012	2,753	5.8%	-	0.0%	5.807	-
2013	5,891	12.4%	1,389	2.3%	10.098	0.394
2014	7,363	15.5%	3,750	6.3%	9.246	0.300
2015	6,684	14.1%	6,798	11.4%	2.704	0.081
2016	6,414	13.5%	9,334	15.6%	-2.117	-0.060
2017	6,757	14.3%	11,400	19.1%	-4.857	-0.131
2018	6,257	13.2%	12,826	21.5%	-8.302	-0.221
2019	4,978	10.5%	13,286	22.3%	-11.772	-0.322
2020	259	0.5%	869	1.5%	-0.910	-0.092
CHA₂DS₂VaSc	Mean	Standard Deviation	Mean	Standard Deviation		
Mean	1.7	1.4	2.0	1.5	-0.249	-0.173
	Number	Percent	Number	Percent		
0	8,885	18.7%	8,870	14.9%	3.873	0.104
1	16,403	34.6%	18,714	31.4%	3.230	0.069
2	9,599	20.2%	13,121	22.0%	-1.747	-0.043
3	6,345	13.4%	8,343	14.0%	-0.601	-0.018

Table 1c. Cohort of New Initiators of Rivaroxaban and Apixaban in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020 (Unmatched, Aggregated), Ratio: 1:1, Caliper: 0.05

Characteristic ¹	Medical Product				Covariate Balance	
	Rivaroxaban		Apixaban		Absolute Difference	Standardized Difference
	Number	Percent	Number	Percent		
4	4,092	8.6%	6,369	10.7%	-2.045	-0.069
5	1,617	3.4%	3,159	5.3%	-1.885	-0.092
>= 6	464	1.0%	1,076	1.8%	-0.825	-0.070
HAS-BLED		Standard		Standard		
	Mean	Deviation	Mean	Deviation		
Mean	1.2	0.9	1.3	0.9	-0.157	-0.172
	Number	Percent	Number	Percent		
0	10,942	23.1%	11,666	19.6%	3.525	0.086
1	22,157	46.7%	25,766	43.2%	3.546	0.071
2	11,065	23.3%	15,842	26.6%	-3.216	-0.074
3	2,738	5.8%	5,102	8.6%	-2.777	-0.108
>= 4	503	1.1%	1,276	2.1%	-1.078	-0.086
Recorded History of:						
Acute myocardial infarction (0-30 days)	631	1.3%	1,239	2.1%	-0.746	-0.058
Acute myocardial infarction (31-183 days)	334	0.7%	731	1.2%	-0.521	-0.053
Cardioablation	2,235	4.7%	2,825	4.7%	-0.021	-0.001
Cardioversion	8,058	17.0%	10,302	17.3%	-0.272	-0.007
Coronary revascularization	3,103	6.5%	5,488	9.2%	-2.654	-0.099
Diabetes	12,004	25.3%	16,754	28.1%	-2.764	-0.063
Heart failure (hospitalized)	5,685	12.0%	9,511	15.9%	-3.952	-0.114
Heart failure (outpatient)	5,832	12.3%	9,258	15.5%	-3.218	-0.093
Hypercholesterolemia	11,824	24.9%	15,598	26.1%	-1.206	-0.028
Hypertension	33,035	69.7%	43,847	73.5%	-3.818	-0.085
Kidney failure (acute)	2,027	4.3%	4,771	8.0%	-3.722	-0.156
Kidney failure (chronic)	2,009	4.2%	4,649	7.8%	-3.556	-0.150
Nicotine dependency	10,214	21.5%	15,522	26.0%	-4.475	-0.105
Obesity	14,514	30.6%	22,153	37.1%	-6.520	-0.138
Other ischemic heart disease	11,753	24.8%	16,961	28.4%	-3.641	-0.082
Other medical conditions	3,773	8.0%	5,639	9.5%	-1.494	-0.053
Peptic ulcer disease	112	0.2%	224	0.4%	-0.139	-0.025
Prior hospitalized bleeding	141	0.3%	311	0.5%	-0.224	-0.035
Stroke (0-30 days)	479	1.0%	880	1.5%	-0.465	-0.042
Stroke (31-183 days)	227	0.5%	533	0.9%	-0.415	-0.050
Transient ischemic attack	1,398	2.9%	2,030	3.4%	-0.454	-0.026
History of Use:						
ACEI/ARB	22,990	48.5%	30,570	51.2%	-2.750	-0.055
Amiodarone	4,304	9.1%	6,176	10.4%	-1.274	-0.043
Anti-coagulant (injectable)	4,825	10.2%	7,158	12.0%	-1.821	-0.058
Antiarrhythmics	9,164	19.3%	10,732	18.0%	1.340	0.034
Antiplatelets	4,407	9.3%	7,290	12.2%	-2.924	-0.094
Beta blockers	32,714	69.0%	42,741	71.7%	-2.641	-0.058
Calcium channel blockers	16,054	33.9%	20,566	34.5%	-0.611	-0.013
Digoxin	3,520	7.4%	3,636	6.1%	1.330	0.053

Table 1c. Cohort of New Initiators of Rivaroxaban and Apixaban in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020 (Unmatched, Aggregated), Ratio: 1:1, Caliper: 0.05

Characteristic ¹	Medical Product				Covariate Balance	
	Rivaroxaban		Apixaban		Absolute Difference	Standardized Difference
	Number	Percent	Number	Percent		
Diuretics (loop)	7,253	15.3%	11,281	18.9%	-3.611	-0.096
Diuretics (potassium sparing)	3,235	6.8%	5,007	8.4%	-1.570	-0.059
Diuretics (thiazide)	9,454	19.9%	12,651	21.2%	-1.265	-0.031
Dronedaron	1,646	3.5%	1,678	2.8%	0.659	0.038
Estrogen	1,111	2.3%	1,577	2.6%	-0.300	-0.019
Fibrates	1,901	4.0%	2,427	4.1%	-0.058	-0.003
H2-antagonist	994	2.1%	1,777	3.0%	-0.882	-0.056
Insulin	2,825	6.0%	4,360	7.3%	-1.350	-0.054
Metformin	7,346	15.5%	10,163	17.0%	-1.541	-0.042
NSAIDs	7,269	15.3%	9,744	16.3%	-1.001	-0.027
Nitrates	2,030	4.3%	3,467	5.8%	-1.530	-0.070
Other diabetes medications	3,111	6.6%	4,676	7.8%	-1.276	-0.049
Proton pump inhibitors	8,679	18.3%	12,116	20.3%	-2.003	-0.051
SSRI antidepressants	5,213	11.0%	7,273	12.2%	-1.196	-0.037
Statins	19,088	40.3%	26,098	43.8%	-3.485	-0.071
Sulfonyreas	2,801	5.9%	3,790	6.4%	-0.445	-0.019
Health Service Utilization Intensity:	Mean	Standard Deviation	Mean	Standard Deviation		
Mean number of ambulatory (AV) encounters	8.7	8.1	9.5	8.7	-0.762	-0.091
Mean number of emergency room (ED) encounters	0.6	1.1	0.7	1.2	-0.080	-0.070
Mean number of inpatient hospital (IP) encounters	0.4	0.6	0.5	0.7	-0.077	-0.114
	Number	Percent	Number	Percent		
No ED encounters (0-30 days)	34,417	72.6%	42,207	70.8%	1.847	0.041
At least 1 ED encounter (0-30 days)	12,988	27.4%	17,445	29.2%	-1.847	-0.041
At least 2 ED encounters (0-30 days)	5,569	11.7%	7,625	12.8%	-1.035	-0.032
No ED encounters (31-183 days)	39,379	83.1%	48,102	80.6%	2.432	0.063
At least 1 ED encounter (31-183 days)	8,026	16.9%	11,550	19.4%	-2.432	-0.063
At least 2 ED encounters (31-183 days)	2,959	6.2%	4,478	7.5%	-1.265	-0.050
	Mean	Standard Deviation	Mean	Standard Deviation		
Mean number of generics	7.8	4.6	8.6	5.0	-0.746	-0.154

¹Covariates in blue show a standardized difference greater than 0.1

²Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete

Table 1d. Cohort of New Initiators of Rivaroxaban and Apixaban in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020 (Matched, Aggregated), Ratio: 1:1, Caliper: 0.05

Characteristic ¹	Medical Product				Covariate Balance	
	Rivaroxaban		Apixaban		Absolute Difference	Standardized Difference
	Number	Percent	Number	Percent		
Patients	45,490	96.0%	45,490	76.3%	-	-
Demographics	Mean	Standard Deviation	Mean	Standard Deviation		
Mean Age (years)	56.5	7.2	56.5	7.3	0.011	0.001
Age (years)	Number	Percent	Number	Percent		
21-49	7,278	16.0%	7,578	16.7%	-0.659	-0.018
50-64	38,212	84.0%	37,912	83.3%	0.659	0.018
Sex						
Female	11,838	26.0%	11,827	26.0%	0.024	0.001
Male	33,652	74.0%	33,663	74.0%	-0.024	-0.001
Race ²						
American Indian or Alaska Native	38	0.1%	39	0.1%	-0.002	-0.001
Asian	116	0.3%	121	0.3%	-0.011	-0.002
Black or African American	832	1.8%	802	1.8%	0.066	0.005
Native Hawaiian or Other Pacific Islander	39	0.1%	39	0.1%	0.000	0.000
Unknown	38,276	84.1%	38,281	84.2%	-0.011	-0.000
White	6,189	13.6%	6,208	13.6%	-0.042	-0.001
Ethnicity						
Hispanic Origin	260	0.6%	261	0.6%	-0.002	-0.000
Year						
2010	-	0.0%	-	0.0%	0.000	-
2011	41	0.1%	-	0.0%	0.090	-
2012	2,529	5.6%	-	0.0%	5.559	-
2013	5,542	12.2%	1,185	2.6%	9.578	0.372
2014	6,981	15.3%	3,133	6.9%	8.459	0.272
2015	6,372	14.0%	5,445	12.0%	2.038	0.061
2016	6,228	13.7%	7,115	15.6%	-1.950	-0.055
2017	6,564	14.4%	8,664	19.0%	-4.616	-0.124
2018	6,110	13.4%	9,592	21.1%	-7.654	-0.204
2019	4,869	10.7%	9,735	21.4%	-10.697	-0.295
2020	254	0.6%	621	1.4%	-0.807	-0.083
CHA₂DS₂VaSc	Mean	Standard Deviation	Mean	Standard Deviation		
Mean	1.8	1.4	1.8	1.4	-0.005	-0.003
	Number	Percent	Number	Percent		
0	8,248	18.1%	8,286	18.2%	-0.084	-0.002
1	15,744	34.6%	15,661	34.4%	0.182	0.004
2	9,361	20.6%	9,330	20.5%	0.068	0.002
3	6,037	13.3%	6,010	13.2%	0.059	0.002

Table 1d. Cohort of New Initiators of Rivaroxaban and Apixaban in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020 (Matched, Aggregated), Ratio: 1:1, Caliper: 0.05

Characteristic ¹	Medical Product				Covariate Balance	
	Rivaroxaban		Apixaban		Absolute Difference	Standardized Difference
	Number	Percent	Number	Percent		
4	4,038	8.9%	4,109	9.0%	-0.156	-0.005
5	1,600	3.5%	1,646	3.6%	-0.101	-0.005
>= 6	462	1.0%	448	1.0%	0.031	0.003
HAS-BLED						
		Standard		Standard		
Mean	Mean	Deviation	Mean	Deviatio		
	1.2	0.9	1.2	0.9	-0.002	-0.003
	Number	Percent	Number	Percent		
0	10,312	22.7%	10,325	22.7%	-0.029	-0.001
1	21,149	46.5%	21,110	46.4%	0.086	0.002
2	10,821	23.8%	10,782	23.7%	0.086	0.002
3	2,705	5.9%	2,757	6.1%	-0.114	-0.005
>= 4	503	1.1%	516	1.1%	-0.029	-0.003
Recorded History of:						
Acute myocardial infarction (0-30 days)	628	1.4%	638	1.4%	-0.022	-0.002
Acute myocardial infarction (31-183 days)	334	0.7%	353	0.8%	-0.042	-0.005
Cardioablation	2,082	4.6%	2,047	4.5%	0.077	0.004
Cardioversion	7,727	17.0%	7,710	16.9%	0.037	0.001
Coronary revascularization	3,073	6.8%	3,082	6.8%	-0.020	-0.001
Diabetes	11,486	25.2%	11,617	25.5%	-0.288	-0.007
Heart failure (hospitalized)	5,571	12.2%	5,526	12.1%	0.099	0.003
Heart failure (outpatient)	5,675	12.5%	5,670	12.5%	0.011	0.000
Hypercholesterolemia	11,378	25.0%	11,324	24.9%	0.119	0.003
Hypertension	31,906	70.1%	31,913	70.2%	-0.015	-0.000
Kidney failure (acute)	2,016	4.4%	2,098	4.6%	-0.180	-0.009
Kidney failure (chronic)	2,005	4.4%	2,085	4.6%	-0.176	-0.008
Nicotine dependency	10,097	22.2%	10,138	22.3%	-0.090	-0.002
Obesity	14,383	31.6%	14,410	31.7%	-0.059	-0.001
Other ischemic heart disease	11,382	25.0%	11,463	25.2%	-0.178	-0.004
Other medical conditions	3,688	8.1%	3,748	8.2%	-0.132	-0.005
Peptic ulcer disease	108	0.2%	108	0.2%	0.000	0.000
Prior hospitalized bleeding	141	0.3%	149	0.3%	-0.018	-0.003
Stroke (0-30 days)	474	1.0%	446	1.0%	0.062	0.006
Stroke (31-183 days)	226	0.5%	222	0.5%	0.009	0.001
Transient ischemic attack	1,362	3.0%	1,350	3.0%	0.026	0.002
History of Use:						
ACEI/ARB	22,179	48.8%	22,223	48.9%	-0.097	-0.002
Amiodarone	4,158	9.1%	4,148	9.1%	0.022	0.001
Anti-coagulant (injectable)	4,721	10.4%	4,726	10.4%	-0.011	-0.000
Antiarrhythmics	8,669	19.1%	8,656	19.0%	0.029	0.001
Antiplatelets	4,351	9.6%	4,378	9.6%	-0.059	-0.002
Beta blockers	31,550	69.4%	31,621	69.5%	-0.156	-0.003
Calcium channel blockers	15,380	33.8%	15,421	33.9%	-0.090	-0.002
Digoxin	3,056	6.7%	3,089	6.8%	-0.073	-0.003

Table 1d. Cohort of New Initiators of Rivaroxaban and Apixaban in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020 (Matched, Aggregated), Ratio: 1:1, Caliper: 0.05

Characteristic ¹	Medical Product				Covariate Balance	
	Rivaroxaban		Apixaban		Absolute Difference	Standardized Difference
	Number	Percent	Number	Percent		
Diuretics (loop)	7,081	15.6%	7,038	15.5%	0.095	0.003
Diuretics (potassium sparing)	3,164	7.0%	3,145	6.9%	0.042	0.002
Diuretics (thiazide)	9,127	20.1%	9,094	20.0%	0.073	0.002
Dronedarone	1,448	3.2%	1,467	3.2%	-0.042	-0.002
Estrogen	1,094	2.4%	1,089	2.4%	0.011	0.001
Fibrates	1,770	3.9%	1,781	3.9%	-0.024	-0.001
H2-antagonist	987	2.2%	990	2.2%	-0.007	-0.000
Insulin	2,697	5.9%	2,717	6.0%	-0.044	-0.002
Metformin	7,058	15.5%	7,138	15.7%	-0.176	-0.005
NSAIDs	7,014	15.4%	6,970	15.3%	0.097	0.003
Nitrates	1,996	4.4%	1,990	4.4%	0.013	0.001
Other diabetes medications	3,006	6.6%	3,069	6.7%	-0.138	-0.006
Proton pump inhibitors	8,421	18.5%	8,412	18.5%	0.020	0.001
SSRI antidepressants	5,053	11.1%	5,089	11.2%	-0.079	-0.003
Statins	18,475	40.6%	18,507	40.7%	-0.070	-0.001
Sulfonyureas	2,667	5.9%	2,676	5.9%	-0.020	-0.001
		Standard		Standard		
Health Service Utilization Intensity:	Mean	Deviation	Mean	Deviation		
Mean number of ambulatory (AV) encounters	8.8	8.1	8.8	8.1	-0.040	-0.005
Mean number of emergency room (ED) encounters	0.6	1.1	0.6	1.1	0.006	0.005
Mean number of inpatient hospital (IP) encounters	0.4	0.6	0.4	0.6	-0.001	-0.002
	Number	Percent	Number	Percent		
No ED encounters (0-30 days)	32,917	72.4%	32,974	72.5%	-0.125	-0.003
At least 1 ED encounter (0-30 days)	12,573	27.6%	12,516	27.5%	0.125	0.003
At least 2 ED encounters (0-30 days)	5,394	11.9%	5,385	11.8%	0.020	0.001
No ED encounters (31-183 days)	37,708	82.9%	37,659	82.8%	0.108	0.003
At least 1 ED encounter (31-183 days)	7,782	17.1%	7,831	17.2%	-0.108	-0.003
At least 2 ED encounters (31-183 days)	2,875	6.3%	2,888	6.3%	-0.029	-0.001
	Mean	Standard Deviation	Mean	Standard Deviation		
Mean number of generics	7.9	4.7	7.9	4.7	-0.013	-0.003

¹Covariates in blue show a standardized difference greater than 0.1

²Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete

Table 1e. Cohort of New Initiators of Dabigatran and Apixaban in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020 (Unmatched, Aggregated), Ratio: 1:1, Caliper: 0.05

Characteristic ¹	Medical Product				Covariate Balance	
	Dabigatran		Apixaban		Absolute Difference	Standardized Difference
	Number	Percent	Number	Percent		
Patients	19,794	100.0%	59,929	100.0%	-	-
Demographics	Mean	Standard Deviation	Mean	Standard Deviation		
Mean Age (years)	56.2	7.3	56.9	7.0	-0.697	-0.097
Age (years)	Number	Percent	Number	Percent		
21-49	3,410	17.2%	8,938	14.9%	2.313	0.063
50-64	16,384	82.8%	50,991	85.1%	-2.313	-0.063
Sex						
Female	4,600	23.2%	17,514	29.2%	-5.985	-0.136
Male	15,194	76.8%	42,415	70.8%	5.985	0.136
Race ²						
American Indian or Alaska Native	22	0.1%	53	0.1%	0.023	0.007
Asian	62	0.3%	145	0.2%	0.071	0.014
Black or African American	255	1.3%	1,340	2.2%	-0.948	-0.072
Native Hawaiian or Other Pacific Islander	10	0.1%	62	0.1%	-0.053	-0.019
Unknown	16,552	83.6%	49,250	82.2%	1.441	0.038
White	2,893	14.6%	9,079	15.1%	-0.534	-0.015
Ethnicity						
Hispanic Origin	106	0.5%	349	0.6%	-0.047	-0.006
Year						
2010	479	2.4%	-	0.0%	2.420	-
2011	6,820	34.5%	-	0.0%	34.455	-
2012	4,602	23.2%	-	0.0%	23.249	-
2013	2,375	12.0%	1,357	2.3%	9.734	0.385
2014	1,512	7.6%	3,699	6.2%	1.466	0.058
2015	1,046	5.3%	6,775	11.3%	-6.021	-0.220
2016	1,274	6.4%	9,395	15.7%	-9.241	-0.298
2017	866	4.4%	11,479	19.2%	-14.779	-0.471
2018	554	2.8%	12,926	21.6%	-18.770	-0.599
2019	258	1.3%	13,427	22.4%	-21.101	-0.691
2020	8	0.0%	871	1.5%	-1.413	-0.165
CHA₂DS₂VaSc	Mean	Standard Deviation	Mean	Standard Deviation		
Mean	1.6	1.3	2.0	1.5	-0.343	-0.242
	Number	Percent	Number	Percent		
0	4,041	20.4%	8,912	14.9%	5.544	0.146
1	6,960	35.2%	18,799	31.4%	3.793	0.081
2	3,914	19.8%	13,191	22.0%	-2.237	-0.055
3	2,774	14.0%	8,379	14.0%	0.033	0.001

Table 1e. Cohort of New Initiators of Dabigatran and Apixaban in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020 (Unmatched, Aggregated), Ratio: 1:1, Caliper: 0.05

Characteristic ¹	Medical Product				Covariate Balance	
	Dabigatran		Apixaban		Absolute Difference	Standardized Difference
	Number	Percent	Number	Percent		
4	1,459	7.4%	6,381	10.6%	-3.277	-0.115
5	479	2.4%	3,187	5.3%	-2.898	-0.151
>= 6	167	0.8%	1,080	1.8%	-0.958	-0.084
HAS-BLED						
		Standard		Standard		
Mean	Mean	Deviation	Mean	Deviation		
Mean	1.1	0.8	1.3	0.9	-0.220	-0.245
	Number	Percent	Number	Percent		
0	4,882	24.7%	11,721	19.6%	5.106	0.123
1	9,587	48.4%	25,870	43.2%	5.266	0.106
2	4,194	21.2%	15,911	26.5%	-5.362	-0.126
3	967	4.9%	5,143	8.6%	-3.697	-0.148
>= 4	164	0.8%	1,284	2.1%	-1.314	-0.109
Recorded History of:						
Acute myocardial infarction (0-30 days)	205	1.0%	1,250	2.1%	-1.050	-0.085
Acute myocardial infarction (31-183 days)	95	0.5%	737	1.2%	-0.750	-0.082
Cardioablation	1,258	6.4%	2,859	4.8%	1.585	0.069
Cardioversion	3,356	17.0%	10,353	17.3%	-0.321	-0.009
Coronary revascularization	1,236	6.2%	5,512	9.2%	-2.953	-0.111
Diabetes	4,920	24.9%	16,817	28.1%	-3.206	-0.073
Heart failure (hospitalized)	2,118	10.7%	9,569	16.0%	-5.267	-0.155
Heart failure (outpatient)	2,334	11.8%	9,320	15.6%	-3.760	-0.110
Hypercholesterolemia	5,245	26.5%	15,684	26.2%	0.327	0.007
Hypertension	13,430	67.8%	44,038	73.5%	-5.635	-0.124
Kidney failure (acute)	620	3.1%	4,785	8.0%	-4.852	-0.213
Kidney failure (chronic)	704	3.6%	4,663	7.8%	-4.224	-0.183
Nicotine dependency	3,148	15.9%	15,605	26.0%	-10.135	-0.251
Obesity	4,396	22.2%	22,242	37.1%	-14.905	-0.331
Other ischemic heart disease	4,940	25.0%	17,044	28.4%	-3.483	-0.079
Other medical conditions	1,394	7.0%	5,660	9.4%	-2.402	-0.087
Peptic ulcer disease	43	0.2%	222	0.4%	-0.153	-0.028
Prior hospitalized bleeding	70	0.4%	311	0.5%	-0.165	-0.025
Stroke (0-30 days)	223	1.1%	891	1.5%	-0.360	-0.032
Stroke (31-183 days)	100	0.5%	535	0.9%	-0.388	-0.047
Transient ischemic attack	641	3.2%	2,041	3.4%	-0.167	-0.009
History of Use:						
ACEI/ARB	9,407	47.5%	30,694	51.2%	-3.693	-0.074
Amiodarone	1,725	8.7%	6,233	10.4%	-1.686	-0.057
Anti-coagulant (injectable)	1,416	7.2%	7,171	12.0%	-4.812	-0.164
Antiarrhythmics	4,343	21.9%	10,827	18.1%	3.875	0.097
Antiplatelets	1,559	7.9%	7,353	12.3%	-4.393	-0.146
Beta blockers	13,382	67.6%	42,948	71.7%	-4.058	-0.088
Calcium channel blockers	6,804	34.4%	20,664	34.5%	-0.107	-0.002
Digoxin	2,153	10.9%	3,659	6.1%	4.771	0.172

Table 1e. Cohort of New Initiators of Dabigatran and Apixaban in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020 (Unmatched, Aggregated), Ratio: 1:1, Caliper: 0.05

Characteristic ¹	Medical Product				Covariate Balance	
	Dabigatran		Apixaban		Absolute Difference	Standardized Difference
	Number	Percent	Number	Percent		
Diuretics (loop)	2,871	14.5%	11,347	18.9%	-4.430	-0.119
Diuretics (potassium sparing)	1,297	6.6%	5,024	8.4%	-1.831	-0.070
Diuretics (thiazide)	3,897	19.7%	12,689	21.2%	-1.486	-0.037
Dronedarone	1,452	7.3%	1,693	2.8%	4.511	0.206
Estrogen	485	2.5%	1,584	2.6%	-0.193	-0.012
Fibrates	982	5.0%	2,439	4.1%	0.891	0.043
H2-antagonist	358	1.8%	1,783	3.0%	-1.167	-0.076
Insulin	1,128	5.7%	4,380	7.3%	-1.610	-0.065
Metformin	2,810	14.2%	10,206	17.0%	-2.834	-0.078
NSAIDs	2,951	14.9%	9,790	16.3%	-1.427	-0.039
Nitrates	848	4.3%	3,488	5.8%	-1.536	-0.070
Other diabetes medications	1,288	6.5%	4,684	7.8%	-1.309	-0.051
Proton pump inhibitors	3,410	17.2%	12,211	20.4%	-3.148	-0.081
SSRI antidepressants	2,020	10.2%	7,310	12.2%	-1.993	-0.063
Statins	8,018	40.5%	26,240	43.8%	-3.278	-0.066
Sulfonyureas	1,228	6.2%	3,814	6.4%	-0.160	-0.007
Health Service Utilization Intensity:	Mean	Standard Deviation	Mean	Standard Deviation		
Mean number of ambulatory (AV) encounters	8.6	7.8	9.5	8.7	-0.886	-0.107
Mean number of emergency room (ED) encounters	0.5	0.9	0.7	1.2	-0.169	-0.159
Mean number of inpatient hospital (IP) encounters	0.4	0.6	0.5	0.7	-0.061	-0.089
	Number	Percent	Number	Percent		
No ED encounters (0-30 days)	14,967	75.6%	42,394	70.7%	4.873	0.110
At least 1 ED encounter (0-30 days)	4,827	24.4%	17,535	29.3%	-4.873	-0.110
At least 2 ED encounters (0-30 days)	2,263	11.4%	7,659	12.8%	-1.347	-0.041
No ED encounters (31-183 days)	16,842	85.1%	48,301	80.6%	4.489	0.119
At least 1 ED encounter (31-183 days)	2,952	14.9%	11,628	19.4%	-4.489	-0.119
At least 2 ED encounters (31-183 days)	1,069	5.4%	4,510	7.5%	-2.125	-0.087
	Mean	Standard Deviation	Mean	Standard Deviation		
Mean number of generics	7.7	4.6	8.6	5.0	-0.853	-0.178

¹Covariates in blue show a standardized difference greater than 0.1

²Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete

Table 1f. Cohort of New Initiators of Dabigatran and Apixaban in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020 (Matched, Aggregated), Ratio: 1:1, Caliper: 0.05

Characteristic ¹	Medical Product				Covariate Balance	
	Dabigatran		Apixaban		Absolute Difference	Standardized Difference
	Number	Percent	Number	Percent		
Patients	19,168	96.8%	19,168	32.0%	-	-
Demographics	Mean	Standard Deviation	Mean	Standard Deviation		
Mean Age (years)	56.3	7.3	56.2	7.6	0.077	0.010
Age (years)	Number	Percent	Number	Percent		
21-49	3,256	17.0%	3,360	17.5%	-0.543	-0.014
50-64	15,912	83.0%	15,808	82.5%	0.543	0.014
Sex						
Female	4,517	23.6%	4,581	23.9%	-0.334	-0.008
Male	14,651	76.4%	14,587	76.1%	0.334	0.008
Race ²						
American Indian or Alaska Native	21	0.1%	16	0.1%	0.026	0.008
Asian	57	0.3%	58	0.3%	-0.005	-0.001
Black or African American	251	1.3%	263	1.4%	-0.063	-0.005
Native Hawaiian or Other Pacific Islander	10	0.1%	12	0.1%	-0.010	-0.004
Unknown	16,057	83.8%	16,001	83.5%	0.292	0.008
White	2,772	14.5%	2,818	14.7%	-0.240	-0.007
Ethnicity						
Hispanic Origin	102	0.5%	130	0.7%	-0.146	-0.019
Year						
2010	457	2.4%	-	0.0%	2.384	-
2011	6,502	33.9%	-	0.0%	33.921	-
2012	4,432	23.1%	-	0.0%	23.122	-
2013	2,323	12.1%	599	3.1%	8.994	0.344
2014	1,491	7.8%	1,519	7.9%	-0.146	-0.005
2015	1,029	5.4%	2,537	13.2%	-7.867	-0.273
2016	1,266	6.6%	3,101	16.2%	-9.573	-0.305
2017	856	4.5%	3,487	18.2%	-13.726	-0.444
2018	549	2.9%	3,970	20.7%	-17.847	-0.576
2019	255	1.3%	3,724	19.4%	-18.098	-0.621
2020	8	0.0%	231	1.2%	-1.163	-0.148
CHA₂DS₂VaSc	Mean	Standard Deviation	Mean	Standard Deviation		
Mean	1.6	1.3	1.6	1.4	-0.010	-0.007
	Number	Percent	Number	Percent		
0	3,908	20.4%	3,896	20.3%	0.063	0.002
1	6,748	35.2%	6,771	35.3%	-0.120	-0.003
2	3,787	19.8%	3,774	19.7%	0.068	0.002
3	2,654	13.8%	2,576	13.4%	0.407	0.012

Table 1f. Cohort of New Initiators of Dabigatran and Apixaban in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020 (Matched, Aggregated), Ratio: 1:1, Caliper: 0.05

Characteristic ¹	Medical Product				Covariate Balance	
	Dabigatran		Apixaban		Absolute Difference	Standardized Difference
	Number	Percent	Number	Percent		
4	1,433	7.5%	1,471	7.7%	-0.198	-0.007
5	473	2.5%	487	2.5%	-0.073	-0.005
>= 6	165	0.9%	193	1.0%	-0.146	-0.015
HAS-BLED	Standard		Standard		0.005	0.006
	Mean	Deviation	Mean	Deviation		
Mean	1.1	0.8	1.1	0.8		
	Number	Percent	Number	Percent		
0	4,743	24.7%	4,773	24.9%	-0.157	-0.004
1	9,226	48.1%	9,252	48.3%	-0.136	-0.003
2	4,077	21.3%	4,026	21.0%	0.266	0.007
3	959	5.0%	955	5.0%	0.021	0.001
>= 4	163	0.9%	162	0.8%	0.005	0.001
Recorded History of:						
Acute myocardial infarction (0-30 days)	203	1.1%	187	1.0%	0.083	0.008
Acute myocardial infarction (31-183 days)	95	0.5%	104	0.5%	-0.047	-0.007
Cardioablation	1,104	5.8%	1,100	5.7%	0.021	0.001
Cardioversion	3,212	16.8%	3,210	16.7%	0.010	0.000
Coronary revascularization	1,196	6.2%	1,150	6.0%	0.240	0.010
Diabetes	4,726	24.7%	4,726	24.7%	0.000	0.000
Heart failure (hospitalized)	2,057	10.7%	2,079	10.8%	-0.115	-0.004
Heart failure (outpatient)	2,251	11.7%	2,306	12.0%	-0.287	-0.009
Hypercholesterolemia	5,020	26.2%	4,906	25.6%	0.595	0.014
Hypertension	12,999	67.8%	12,950	67.6%	0.256	0.005
Kidney failure (acute)	616	3.2%	651	3.4%	-0.183	-0.010
Kidney failure (chronic)	695	3.6%	711	3.7%	-0.083	-0.004
Nicotine dependency	3,101	16.2%	3,106	16.2%	-0.026	-0.001
Obesity	4,357	22.7%	4,314	22.5%	0.224	0.005
Other ischemic heart disease	4,743	24.7%	4,728	24.7%	0.078	0.002
Other medical conditions	1,350	7.0%	1,339	7.0%	0.057	0.002
Peptic ulcer disease	43	0.2%	38	0.2%	0.026	0.006
Prior hospitalized bleeding	69	0.4%	52	0.3%	0.089	0.016
Stroke (0-30 days)	217	1.1%	228	1.2%	-0.057	-0.005
Stroke (31-183 days)	98	0.5%	106	0.6%	-0.042	-0.006
Transient ischemic attack	614	3.2%	637	3.3%	-0.120	-0.007
History of Use:						
ACEI/ARB	9,095	47.4%	9,081	47.4%	0.073	0.001
Amiodarone	1,669	8.7%	1,610	8.4%	0.308	0.011
Anti-coagulant (injectable)	1,393	7.3%	1,405	7.3%	-0.063	-0.002
Antiarrhythmics	4,158	21.7%	4,138	21.6%	0.104	0.003
Antiplatelets	1,528	8.0%	1,508	7.9%	0.104	0.004
Beta blockers	12,967	67.6%	12,936	67.5%	0.162	0.003
Calcium channel blockers	6,568	34.3%	6,583	34.3%	-0.078	-0.002
Digoxin	1,904	9.9%	1,928	10.1%	-0.125	-0.004

Table 1f. Cohort of New Initiators of Dabigatran and Apixaban in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020 (Matched, Aggregated), Ratio: 1:1, Caliper: 0.05

Characteristic ¹	Medical Product				Covariate Balance	
	Dabigatran		Apixaban		Absolute Difference	Standardized Difference
	Number	Percent	Number	Percent		
Diuretics (loop)	2,772	14.5%	2,846	14.8%	-0.386	-0.011
Diuretics (potassium sparing)	1,252	6.5%	1,242	6.5%	0.052	0.002
Diuretics (thiazide)	3,769	19.7%	3,784	19.7%	-0.078	-0.002
Dronedarone	1,174	6.1%	1,167	6.1%	0.037	0.002
Estrogen	470	2.5%	458	2.4%	0.063	0.004
Fibrates	917	4.8%	899	4.7%	0.094	0.004
H2-antagonist	354	1.8%	337	1.8%	0.089	0.007
Insulin	1,090	5.7%	1,067	5.6%	0.120	0.005
Metformin	2,730	14.2%	2,744	14.3%	-0.073	-0.002
NSAIDs	2,848	14.9%	2,818	14.7%	0.157	0.004
Nitrates	819	4.3%	833	4.3%	-0.073	-0.004
Other diabetes medications	1,247	6.5%	1,239	6.5%	0.042	0.002
Proton pump inhibitors	3,311	17.3%	3,297	17.2%	0.073	0.002
SSRI antidepressants	1,979	10.3%	2,074	10.8%	-0.496	-0.016
Statins	7,746	40.4%	7,702	40.2%	0.230	0.005
Sulfonyureas	1,175	6.1%	1,128	5.9%	0.245	0.010
Health Service Utilization Intensity:	Mean	Standard Deviation	Mean	Standard Deviation		
Mean number of ambulatory (AV) encounters	8.6	7.7	8.6	8.1	-0.047	-0.006
Mean number of emergency room (ED) encounters	0.5	0.9	0.5	1.0	-0.004	-0.004
Mean number of inpatient hospital (IP) encounters	0.4	0.6	0.4	0.7	0.004	0.007
	Number	Percent	Number	Percent		
No ED encounters (0-30 days)	14,498	75.6%	14,534	75.8%	-0.188	-0.004
At least 1 ED encounter (0-30 days)	4,670	24.4%	4,634	24.2%	0.188	0.004
At least 2 ED encounters (0-30 days)	2,166	11.3%	2,152	11.2%	0.073	0.002
No ED encounters (31-183 days)	16,320	85.1%	16,393	85.5%	-0.381	-0.011
At least 1 ED encounter (31-183 days)	2,848	14.9%	2,775	14.5%	0.381	0.011
At least 2 ED encounters (31-183 days)	1,030	5.4%	997	5.2%	0.172	0.008
	Mean	Standard Deviation	Mean	Standard Deviation		
Mean number of generics	7.7	4.6	7.7	4.6	0.016	0.004

¹Covariates in blue show a standardized difference greater than 0.1

²Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete

Table 2. Effect Estimates for Risk of Thromboembolic Stroke among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	46,957	14,705.44	114.38	0.31	53	3.6	1.13	-2.5	-0.44	0.67 (0.43, 1.04)	0.077
Dabigatran	19,735	5,079.71	94.01	0.26	31	6.1	1.57				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	19,478	2,512.43	47.11	0.13	8	3.18	0.41	-6.37	-0.82	0.33 (0.15, 0.74)	0.007
Dabigatran	19,478	2,512.43	47.11	0.13	24	9.55	1.23				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	19,478	6,102.81	114.44	0.31	13	2.13	0.67	-4.06	-0.92	0.37 (0.19, 0.71)	0.003
Dabigatran	19,478	5,010.43	93.96	0.26	31	6.19	1.59				

¹Conditional analysis includes informative events and person-time.

Table 3. Effect Estimates for Risk of Thromboembolic Stroke among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Antiplatelets

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
No Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	42,557	13,211.18	113.39	0.31	46	3.48	1.08	-2.31	-0.4	0.68 (0.42, 1.10)	0.119
Dabigatran	18,180	4,659.12	93.61	0.26	27	5.8	1.49				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	17,874	2,302.68	47.05	0.13	7	3.04	0.39	-6.08	-0.78	0.33 (0.14, 0.78)	0.012
Dabigatran	17,874	2,302.68	47.05	0.13	21	9.12	1.17				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	17,874	5,547.49	113.36	0.31	12	2.16	0.67	-3.73	-0.84	0.40 (0.20, 0.78)	0.008
Dabigatran	17,874	4,581.04	93.61	0.26	27	5.89	1.51				
Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	4,400	1,494.26	124.04	0.34	7	4.68	1.59	-4.83	-0.98	0.52 (0.15, 1.80)	0.304
Dabigatran	1,555	420.59	98.79	0.27	4	9.51	2.57				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	1,452	206.35	51.91	0.14	1	4.85	0.69	-9.69	-1.38	0.33 (0.03, 3.20)	0.341
Dabigatran	1,452	206.35	51.91	0.14	3	14.54	2.07				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	1,452	508.68	127.96	0.35	1	1.97	0.69	-8.19	-2.07	0.20 (0.02, 1.85)	0.158
Dabigatran	1,452	393.84	99.07	0.27	4	10.16	2.75				

¹Conditional analysis includes informative events and person-time.

Table 4. Effect Estimates for Risk of Thromboembolic Stroke among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Sex

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Male											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	35,054	10,705.82	111.55	0.31	38	3.55	1.08	-1.68	-0.24	0.76 (0.44, 1.31)	0.326
Dabigatran	15,155	3,821.44	92.1	0.25	20	5.23	1.32				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	14,863	1,903.58	46.78	0.13	6	3.15	0.4	-4.2	-0.54	0.43 (0.16, 1.12)	0.082
Dabigatran	14,863	1,903.58	46.78	0.13	14	7.35	0.94				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	14,863	4,585.12	112.68	0.31	11	2.4	0.74	-2.94	-0.61	0.49 (0.24, 1.03)	0.059
Dabigatran	14,863	3,743.03	91.98	0.25	20	5.34	1.35				
Female											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	11,903	3,999.62	122.73	0.34	15	3.75	1.26	-4.99	-1.14	0.50 (0.23, 1.08)	0.078
Dabigatran	4,580	1,258.27	100.35	0.27	11	8.74	2.4				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	4,452	596.16	48.91	0.13	2	3.35	0.45	-8.39	-1.12	0.29 (0.06, 1.38)	0.118
Dabigatran	4,452	596.16	48.91	0.13	7	11.74	1.57				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	4,452	1,471.37	120.71	0.33	2	1.36	0.45	-7.59	-2.02	0.16 (0.04, 0.72)	0.017
Dabigatran	4,452	1,229.01	100.83	0.28	11	8.95	2.47				

¹Conditional analysis includes informative events and person-time.

Table 5. Effect Estimates for Risk of Thromboembolic Stroke among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Age Group

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Age Group: 21-49 years											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	7,914	1,857.25	85.72	0.23	6	3.23	0.76	-1.4	-0.12	0.72 (0.18, 2.90)	0.647
Dabigatran	3,406	648.15	69.51	0.19	3	4.63	0.88				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	3,235	347.98	39.29	0.11	0	0	0	-2.87	-0.31	-	-
Dabigatran	3,235	347.98	39.29	0.11	1	2.87	0.31				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	3,235	764.48	86.31	0.24	0	0	0	-4.88	-0.93	-	-
Dabigatran	3,235	614.2	69.35	0.19	3	4.88	0.93				
Age Group: 50-64 years											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	39,043	12,848.19	120.2	0.33	47	3.66	1.2	-2.66	-0.51	0.66 (0.42, 1.06)	0.089
Dabigatran	16,329	4,431.56	99.13	0.27	28	6.32	1.71				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	16,050	2,155.28	49.05	0.13	10	4.64	0.62	-5.1	-0.69	0.48 (0.22, 1.01)	0.053
Dabigatran	16,050	2,155.28	49.05	0.13	21	9.74	1.31				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	16,050	5,292.25	120.44	0.33	12	2.27	0.75	-4.17	-1	0.39 (0.20, 0.76)	0.006
Dabigatran	16,050	4,347.33	98.93	0.27	28	6.44	1.74				

¹Conditional analysis includes informative events and person-time.

Table 6. Effect Estimates for Risk of Thromboembolic Stroke among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
CHA₂DS₂VaSc Score: 0											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	8,747	2,145.82	89.6	0.25	7	3.26	0.8				
Dabigatran	4,031	862.06	78.11	0.21	3	3.48	0.74	-0.22	0.06	1.00 (0.26, 3.88)	0.999
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	3,901	443.68	41.54	0.11	2	4.51	0.51				
Dabigatran	3,901	443.68	41.54	0.11	1	2.25	0.26	2.25	0.26	2.00 (0.18, 22.06)	0.571
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	3,901	954.68	89.39	0.24	4	4.19	1.03				
Dabigatran	3,901	832.88	77.98	0.21	3	3.6	0.77	0.59	0.26	1.16 (0.26, 5.22)	0.842
CHA₂DS₂VaSc Score: 1											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	16,216	5,002.89	112.69	0.31	10	2	0.62				
Dabigatran	6,940	1,728.85	90.99	0.25	5	2.89	0.72	-0.89	-0.1	0.79 (0.27, 2.32)	0.666
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	6,713	854.5	46.49	0.13	0	0	0				
Dabigatran	6,713	854.5	46.49	0.13	4	4.68	0.6	-4.68	-0.6	-	-
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	6,713	2,079.71	113.16	0.31	0	0	0				
Dabigatran	6,713	1,679.01	91.35	0.25	5	2.98	0.74	-2.98	-0.74	-	-
CHA₂DS₂VaSc Score: 2											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	9,535	3,314.78	126.98	0.35	10	3.02	1.05				
Dabigatran	3,902	1,092.18	102.23	0.28	5	4.58	1.28	-1.56	-0.23	0.83 (0.28, 2.44)	0.733

Table 6. Effect Estimates for Risk of Thromboembolic Stroke among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	3,706	509.88	50.25	0.14	4	7.84	1.08				
Dabigatran	3,706	509.88	50.25	0.14	5	9.81	1.35	-1.96	-0.27	0.80 (0.21, 2.98)	0.739
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	3,706	1,297.62	127.89	0.35	4	3.08	1.08				
Dabigatran	3,706	1,033.68	101.88	0.28	5	4.84	1.35	-1.75	-0.27	0.75 (0.20, 2.80)	0.669
CHA₂DS₂VaSc Score: 3											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	6,311	2,283.32	132.15	0.36	7	3.07	1.11				
Dabigatran	2,766	810.68	107.05	0.29	4	4.93	1.45	-1.87	-0.34	0.72 (0.21, 2.48)	0.606
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	2,678	391.27	53.37	0.15	1	2.56	0.37				
Dabigatran	2,678	391.27	53.37	0.15	4	10.22	1.49	-7.67	-1.12	0.25 (0.03, 2.24)	0.215
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	2,678	981.78	133.9	0.37	2	2.04	0.75				
Dabigatran	2,678	789.37	107.66	0.29	4	5.07	1.49	-3.03	-0.75	0.43 (0.08, 2.36)	0.331
CHA₂DS₂VaSc Score: 4											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	4,065	1,349.98	121.3	0.33	8	5.93	1.97				
Dabigatran	1,454	407.01	102.24	0.28	7	17.2	4.81	-11.27	-2.85	0.36 (0.13, 1.01)	0.051
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	1,375	189.02	50.21	0.14	0	0	0				
Dabigatran	1,375	189.02	50.21	0.14	3	15.87	2.18	-15.87	-2.18	-	-
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	1,375	458.51	121.8	0.33	1	2.18	0.73				
Dabigatran	1,375	388.02	103.07	0.28	7	18.04	5.09	-15.86	-4.36	0.13 (0.02, 1.03)	0.053
CHA₂DS₂VaSc Score: 5											
Unmatched Analysis (Site-adjusted only)											

Table 6. Effect Estimates for Risk of Thromboembolic Stroke among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Rivaroxaban	1,618	486.57	109.84	0.3	4	8.22	2.47	-29.32	-8.01	0.22 (0.06, 0.84)	0.026
Dabigatran	477	133.18	101.98	0.28	5	37.54	10.48				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	424	57.55	49.58	0.14	1	17.38	2.36	-34.75	-4.72	0.33 (0.03, 3.20)	0.341
Dabigatran	424	57.55	49.58	0.14	3	52.13	7.08				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	424	133.24	114.78	0.31	1	7.51	2.36	-34.98	-9.43	0.17 (0.02, 1.50)	0.112
Dabigatran	424	117.7	101.39	0.28	5	42.48	11.79				
CHA₂DS₂VaSc Score: 6+											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	465	122.08	95.89	0.26	7	57.34	15.05	13.61	2.93	1.32 (0.27, 6.38)	0.727
Dabigatran	165	45.74	101.24	0.28	2	43.73	12.12				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	142	16.92	43.53	0.12	1	59.1	7.04	-59.1	-7.04	0.50 (0.05, 5.51)	0.571
Dabigatran	142	16.92	43.53	0.12	2	118.2	14.08				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	142	34.69	89.23	0.24	1	28.83	7.04	-23.87	-7.04	0.52 (0.05, 5.72)	0.592
Dabigatran	142	37.95	97.63	0.27	2	52.7	14.08				

¹Conditional analysis includes informative events and person-time.

Table 7. Effect Estimates for Risk of Thromboembolic Stroke among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
HAS-BLED Score: 0											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	10,799	2,869.67	97.06	0.27	7	2.44	0.65	-1.15	-0.17	0.77 (0.23, 2.65)	0.682
Dabigatran	4,867	1,115.44	83.71	0.23	4	3.59	0.82				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	4,727	555.28	42.91	0.12	2	3.6	0.42	0	0	1.00 (0.14, 7.10)	1
Dabigatran	4,727	555.28	42.91	0.12	2	3.6	0.42				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	4,727	1,228.28	94.91	0.26	3	2.44	0.63	-1.24	-0.21	0.68 (0.15, 3.07)	0.621
Dabigatran	4,727	1,085.45	83.87	0.23	4	3.69	0.85				
HAS-BLED Score: 1											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	21,938	7,256.82	120.82	0.33	22	3.03	1	-3.16	-0.67	0.55 (0.29, 1.04)	0.067
Dabigatran	9,562	2,582.38	98.64	0.27	16	6.2	1.67				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	9,259	1,231.98	48.6	0.13	3	2.44	0.32	-7.31	-0.97	0.25 (0.07, 0.89)	0.032
Dabigatran	9,259	1,231.98	48.6	0.13	12	9.74	1.3				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	9,259	3,080.67	121.53	0.33	7	2.27	0.76	-3.73	-0.86	0.41 (0.17, 1.01)	0.052
Dabigatran	9,259	2,500.84	98.65	0.27	15	6	1.62				
HAS-BLED Score: 2											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	10,990	3,649.98	121.31	0.33	12	3.29	1.09	-1.25	-0.1	0.88 (0.31, 2.52)	0.815
Dabigatran	4,182	1,102.11	96.26	0.26	5	4.54	1.2				

Table 7. Effect Estimates for Risk of Thromboembolic Stroke among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	4,006	531.82	48.49	0.13	1	1.88	0.25	-3.76	-0.5	0.33 (0.03, 3.20)	0.341
Dabigatran	4,006	531.82	48.49	0.13	3	5.64	0.75				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	4,006	1,339.57	122.14	0.33	1	0.75	0.25	-4.03	-1	0.17 (0.02, 1.46)	0.106
Dabigatran	4,006	1,046.69	95.43	0.26	5	4.78	1.25				
HAS-BLED Score: 3											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	2,724	807.35	108.25	0.3	8	9.91	2.94	-10.1	-2.25	0.54 (0.17, 1.66)	0.279
Dabigatran	964	249.93	94.7	0.26	5	20.01	5.19				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	884	116.42	48.1	0.13	1	8.59	1.13	-25.77	-3.39	0.25 (0.03, 2.24)	0.215
Dabigatran	884	116.42	48.1	0.13	4	34.36	4.52				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	884	277.2	114.53	0.31	1	3.61	1.13	-17.96	-4.52	0.19 (0.02, 1.62)	0.128
Dabigatran	884	231.82	95.78	0.26	5	21.57	5.66				
HAS-BLED Score: 4+											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	506	121.62	87.79	0.24	4	32.89	7.91	-0.61	1.66	1.25 (0.14, 11.28)	0.842
Dabigatran	160	29.85	68.14	0.19	1	33.5	6.25				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	126	13.14	38.1	0.1	0	0	0	-76.1	-7.94	-	-
Dabigatran	126	13.14	38.1	0.1	1	76.1	7.94				

Table 7. Effect Estimates for Risk of Thromboembolic Stroke among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	126	27.23	78.93	0.22	0	0	0	-40.21	-7.94	-	-
Dabigatran	126	24.87	72.1	0.2	1	40.21	7.94				

¹Conditional analysis includes informative events and person-time.

Table 8. Effect Estimates for Risk of Thromboembolic Stroke among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	47,405	14,822.65	114.21	0.31	53	3.58	1.12	-0.57	-0.16	0.87 (0.61, 1.24)	0.441
Apixaban	59,652	18,323.76	112.2	0.31	76	4.15	1.27				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	45,490	6,412.05	51.48	0.14	39	6.08	0.86	1.56	0.22	1.34 (0.83, 2.17)	0.227
Apixaban	45,490	6,412.05	51.48	0.14	29	4.52	0.64				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	45,490	14,293.86	114.77	0.31	52	3.64	1.14	0.28	0.11	1.10 (0.74, 1.63)	0.638
Apixaban	45,490	14,013.14	112.51	0.31	47	3.35	1.03				

¹Conditional analysis includes informative events and person-time.

Table 9. Effect Estimates for Risk of Thromboembolic Stroke among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Antiplatelets

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
No Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	42,998	13,324.65	113.19	0.31	46	3.45	1.07	-0.24	-0.06	0.93 (0.63, 1.37)	0.728
Apixaban	52,362	15,983.64	111.49	0.31	59	3.69	1.13				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	40,966	5,741.25	51.19	0.14	34	5.92	0.83	1.92	0.27	1.48 (0.87, 2.51)	0.148
Apixaban	40,966	5,741.25	51.19	0.14	23	4.01	0.56				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	40,966	12,772.52	113.88	0.31	45	3.52	1.1	0.65	0.22	1.24 (0.80, 1.92)	0.339
Apixaban	40,966	12,515.94	111.59	0.31	36	2.88	0.88				
Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	4,407	1,498.00	124.15	0.34	7	4.67	1.59	-2.59	-0.74	0.68 (0.28, 1.64)	0.394
Apixaban	7,290	2,340.13	117.25	0.32	17	7.26	2.33				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	4,220	666.64	57.7	0.16	6	9	1.42	0	0	1.00 (0.32, 3.10)	1
Apixaban	4,220	666.64	57.7	0.16	6	9	1.42				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	4,220	1,433.73	124.09	0.34	7	4.88	1.66	-2.94	-0.95	0.64 (0.25, 1.65)	0.357
Apixaban	4,220	1,407.00	121.78	0.33	11	7.82	2.61				

¹Conditional analysis includes informative events and person-time.

Table 10. Effect Estimates for Risk of Thromboembolic Stroke among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Sex

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Male											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	35,418	10,809.59	111.47	0.31	38	3.52	1.07	-1.11	-0.3	0.77 (0.51, 1.16)	0.212
Apixaban	42,211	12,534.61	108.46	0.3	58	4.63	1.37				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	33,516	4,661.15	50.8	0.14	26	5.58	0.78	0.86	0.12	1.18 (0.67, 2.09)	0.564
Apixaban	33,516	4,661.15	50.8	0.14	22	4.72	0.66				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	33,516	10,278.93	112.02	0.31	37	3.6	1.1	-0.11	0	0.99 (0.63, 1.56)	0.972
Apixaban	33,516	9,981.14	108.77	0.3	37	3.71	1.1				
Female											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	11,987	4,013.06	122.28	0.33	15	3.74	1.25	0.63	0.22	1.21 (0.61, 2.40)	0.59
Apixaban	17,441	5,789.15	121.24	0.33	18	3.11	1.03				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	11,719	1,747.43	54.46	0.15	14	8.01	1.19	4.58	0.68	2.33 (0.90, 6.07)	0.082
Apixaban	11,719	1,747.43	54.46	0.15	6	3.43	0.51				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	11,719	3,933.26	122.59	0.34	15	3.81	1.28	1.28	0.43	1.48 (0.66, 3.29)	0.339
Apixaban	11,719	3,950.75	123.13	0.34	10	2.53	0.85				

¹Conditional analysis includes informative events and person-time.

Table 11. Effect Estimates for Risk of Thromboembolic Stroke among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Age Group

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Age Group: 21-49 years											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	7,982	1,871.33	85.63	0.23	6	3.21	0.75	-0.61	-0.15	0.87 (0.30, 2.52)	0.799
Apixaban	8,905	2,095.07	85.93	0.24	8	3.82	0.9				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	7,219	824.65	41.72	0.11	5	6.06	0.69	3.64	0.42	2.50 (0.49, 12.89)	0.273
Apixaban	7,219	824.65	41.72	0.11	2	2.43	0.28				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	7,219	1,707.68	86.4	0.24	5	2.93	0.69	0.55	0.14	1.22 (0.33, 4.56)	0.764
Apixaban	7,219	1,681.92	85.1	0.23	4	2.38	0.55				
Age Group: 50-64 years											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	39,423	12,951.33	119.99	0.33	47	3.63	1.19	-0.56	-0.15	0.88 (0.60, 1.27)	0.489
Apixaban	50,747	16,228.69	116.81	0.32	68	4.19	1.34				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	37,839	5,542.52	53.5	0.15	35	6.31	0.92	1.26	0.18	1.25 (0.76, 2.05)	0.379
Apixaban	37,839	5,542.52	53.5	0.15	28	5.05	0.74				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	37,839	12,454.42	120.22	0.33	47	3.77	1.24	0.26	0.11	1.09 (0.72, 1.64)	0.692
Apixaban	37,839	12,221.01	117.97	0.32	43	3.52	1.14				

¹Conditional analysis includes informative events and person-time.

Table 12. Effect Estimates for Risk of Thromboembolic Stroke among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
CHA₂DS₂VaSc Score: 0											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	8,885	2,181.34	89.67	0.25	7	3.21	0.79	1.32	0.34	1.69 (0.50, 5.78)	0.401
Apixaban	8,870	2,120.39	87.31	0.24	4	1.89	0.45				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	8,144	953.42	42.76	0.12	5	5.24	0.61	2.1	0.25	1.67 (0.40, 6.97)	0.484
Apixaban	8,144	953.42	42.76	0.12	3	3.15	0.37				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	8,144	2,003.07	89.84	0.25	7	3.49	0.86	1.43	0.37	1.71 (0.50, 5.83)	0.394
Apixaban	8,144	1,940.16	87.01	0.24	4	2.06	0.49				
CHA₂DS₃VaSc Score: 1											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	16,403	5,049.17	112.43	0.31	10	1.98	0.61	0.2	0.08	1.15 (0.48, 2.77)	0.755
Apixaban	18,714	5,631.50	109.91	0.3	10	1.78	0.53				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	15,545	2,185.02	51.34	0.14	8	3.66	0.51	1.37	0.19	1.60 (0.52, 4.89)	0.41
Apixaban	15,545	2,185.02	51.34	0.14	5	2.29	0.32				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	15,545	4,834.98	113.6	0.31	10	2.07	0.64	0.15	0.06	1.12 (0.45, 2.75)	0.808
Apixaban	15,545	4,698.24	110.39	0.3	9	1.92	0.58				
CHA₂DS₃VaSc Score: 2											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	9,599	3,327.22	126.6	0.35	11	3.31	1.15	-1.25	-0.38	0.74 (0.35, 1.54)	0.421
Apixaban	13,121	4,389.92	122.2	0.33	20	4.56	1.52				

Table 12. Effect Estimates for Risk of Thromboembolic Stroke among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	9,198	1,403.61	55.74	0.15	9	6.41	0.98	2.14	0.33	1.50 (0.53, 4.21)	0.442
Apixaban	9,198	1,403.61	55.74	0.15	6	4.27	0.65				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	9,198	3,190.49	126.69	0.35	11	3.45	1.2	-0.07	0	1.00 (0.43, 2.31)	1
Apixaban	9,198	3,126.85	124.17	0.34	11	3.52	1.2				
CHA₂DS₂VaSc Score: 3											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	6,345	2,295.18	132.12	0.36	7	3.05	1.1	-1.87	-0.57	0.60 (0.24, 1.50)	0.278
Apixaban	8,343	2,847.59	124.67	0.34	14	4.92	1.68				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	5,860	928.84	57.89	0.16	5	5.38	0.85	1.08	0.17	1.25 (0.34, 4.65)	0.739
Apixaban	5,860	928.84	57.89	0.16	4	4.31	0.68				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	5,860	2,133.72	132.99	0.36	6	2.81	1.02	-1.6	-0.51	0.65 (0.23, 1.84)	0.421
Apixaban	5,860	2,037.89	127.02	0.35	9	4.42	1.54				
CHA₂DS₂VaSc Score: 4											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	4,092	1,357.19	121.14	0.33	8	5.89	1.96	0.23	0.07	1.10 (0.45, 2.69)	0.841
Apixaban	6,369	2,117.74	121.45	0.33	12	5.67	1.88				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	3,956	606.81	56.03	0.15	4	6.59	1.01	3.3	0.51	2.00 (0.37, 10.92)	0.423
Apixaban	3,956	606.81	56.03	0.15	2	3.3	0.51				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	3,956	1,314.21	121.34	0.33	8	6.09	2.02	2.43	0.76	1.62 (0.53, 4.97)	0.395
Apixaban	3,956	1,365.61	126.08	0.35	5	3.66	1.26				
CHA₂DS₂VaSc Score: 5											

Table 12. Effect Estimates for Risk of Thromboembolic Stroke among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	1,617	488.93	110.44	0.3	3	6.14	1.86	-1.44	-0.36	0.81 (0.21, 3.14)	0.761
Apixaban	3,159	924.17	106.85	0.29	7	7.57	2.22				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	1,552	216.67	50.99	0.14	2	9.23	1.29	0	0	1.00 (0.14, 7.10)	1
Apixaban	1,552	216.67	50.99	0.14	2	9.23	1.29				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	1,552	474.03	111.56	0.31	3	6.33	1.93	-1.95	-0.64	0.73 (0.16, 3.27)	0.682
Apixaban	1,552	482.89	113.64	0.31	4	8.28	2.58				
CHA₂DS₂VaSc Score: 6+											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	464	123.62	97.31	0.27	7	56.63	15.09	25.85	6.72	1.71 (0.64, 4.61)	0.286
Apixaban	1,076	292.45	99.27	0.27	9	30.77	8.36				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	405	55.44	50	0.14	6	108.23	14.81	72.15	9.88	3.00 (0.61, 14.86)	0.178
Apixaban	405	55.44	50	0.14	2	36.08	4.94				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	405	111.35	100.42	0.27	7	62.86	17.28	28.69	7.41	1.85 (0.54, 6.34)	0.325
Apixaban	405	117.04	105.55	0.29	4	34.18	9.88				

¹Conditional analysis includes informative events and person-time.

Table 13. Effect Estimates for Risk of Thromboembolic Stroke among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
HAS-BLED Score: 0											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	10,942	2,901.44	96.85	0.27	7	2.41	0.64	-0.17	-0.05	0.93 (0.34, 2.56)	0.886
Apixaban	11,666	3,103.36	97.16	0.27	8	2.58	0.69				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	10,183	1,269.64	45.54	0.12	5	3.94	0.49	1.58	0.2	1.67 (0.40, 6.97)	0.484
Apixaban	10,183	1,269.64	45.54	0.12	3	2.36	0.29				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	10,183	2,721.36	97.61	0.27	7	2.57	0.69	0.33	0.1	1.17 (0.39, 3.47)	0.783
Apixaban	10,183	2,673.74	95.9	0.26	6	2.24	0.59				
HAS-BLED Score: 1											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	22,157	7,307.11	120.45	0.33	22	3.01	0.99	0.51	0.18	1.23 (0.67, 2.23)	0.504
Apixaban	25,766	8,381.53	118.81	0.33	21	2.51	0.82				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	20,948	3,085.16	53.79	0.15	13	4.21	0.62	0.97	0.14	1.30 (0.57, 2.96)	0.533
Apixaban	20,948	3,085.16	53.79	0.15	10	3.24	0.48				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	20,948	6,955.76	121.28	0.33	21	3.02	1	0.53	0.19	1.24 (0.66, 2.36)	0.506
Apixaban	20,948	6,830.51	119.1	0.33	17	2.49	0.81				
HAS-BLED Score: 2											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	11,065	3,677.66	121.4	0.33	13	3.53	1.17	-2.38	-0.72	0.60 (0.31, 1.15)	0.124
Apixaban	15,842	5,068.58	116.86	0.32	30	5.92	1.89				

Table 13. Effect Estimates for Risk of Thromboembolic Stroke among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	10,630	1,570.49	53.96	0.15	10	6.37	0.94	0	0	1.00 (0.42, 2.40)	1
Apixaban	10,630	1,570.49	53.96	0.15	10	6.37	0.94				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	10,630	3,529.41	121.27	0.33	13	3.68	1.22	-1.27	-0.38	0.75 (0.36, 1.54)	0.429
Apixaban	10,630	3,433.44	117.97	0.32	17	4.95	1.6				
HAS-BLED Score: 3											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	2,738	815.07	108.73	0.3	8	9.82	2.92	2.91	0.96	1.46 (0.58, 3.71)	0.423
Apixaban	5,102	1,447.80	103.65	0.28	10	6.91	1.96				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	2,647	360.03	49.68	0.14	6	16.67	2.27	11.11	1.51	3.00 (0.61, 14.86)	0.178
Apixaban	2,647	360.03	49.68	0.14	2	5.56	0.76				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	2,647	788.07	108.74	0.3	8	10.15	3.02	5.08	1.51	2.12 (0.63, 7.07)	0.223
Apixaban	2,647	789.43	108.93	0.3	4	5.07	1.51				
HAS-BLED Score: 4+											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	503	121.39	88.14	0.24	3	24.71	5.96	3.01	0.48	1.03 (0.27, 4.00)	0.964
Apixaban	1,276	322.5	92.31	0.25	7	21.71	5.49				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	466	52.24	40.94	0.11	2	38.28	4.29	0	0	1.00 (0.14, 7.10)	1
Apixaban	466	52.24	40.94	0.11	2	38.28	4.29				

Table 13. Effect Estimates for Risk of Thromboembolic Stroke among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	466	112.79	88.41	0.24	2	17.73	4.29	-7.44	-2.15	0.68 (0.11, 4.05)	0.669
Apixaban	466	119.16	93.4	0.26	3	25.18	6.44				

¹Conditional analysis includes informative events and person-time.

Table 14. Effect Estimates for Risk of Thromboembolic Stroke among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Unmatched Analysis (Site-adjusted only)											
Dabigatran	19,794	5,098.02	94.07	0.26	31	6.08	1.57	2	0.31	1.35 (0.89, 2.06)	0.162
Apixaban	59,929	18,380.61	112.02	0.31	75	4.08	1.25				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	19,168	2,465.18	46.97	0.13	22	8.92	1.15	4.46	0.57	2.00 (0.97, 4.12)	0.061
Apixaban	19,168	2,465.18	46.97	0.13	11	4.46	0.57				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	19,168	4,950.75	94.34	0.26	31	6.26	1.62	3.17	0.68	1.87 (1.05, 3.35)	0.034
Apixaban	19,168	5,826.51	111.03	0.3	18	3.09	0.94				

¹Conditional analysis includes informative events and person-time.

Table 15. Effect Estimates for Risk of Thromboembolic Stroke among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Antiplatelets

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
No Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	18,235	4,674.70	93.63	0.26	27	5.78	1.48	2.16	0.38	1.40 (0.89, 2.22)	0.15
Apixaban	52,576	16,023.68	111.32	0.3	58	3.62	1.1				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	17,571	2,253.49	46.84	0.13	20	8.88	1.14	3.99	0.51	1.82 (0.87, 3.79)	0.111
Apixaban	17,571	2,253.49	46.84	0.13	11	4.88	0.63				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	17,571	4,513.30	93.82	0.26	27	5.98	1.54	2.8	0.57	1.72 (0.93, 3.15)	0.082
Apixaban	17,571	5,333.79	110.87	0.3	17	3.19	0.97				
Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	1,559	423.32	99.18	0.27	4	9.45	2.57	2.24	0.25	1.38 (0.46, 4.13)	0.561
Apixaban	7,353	2,356.93	117.08	0.32	17	7.21	2.31				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	1,442	191.63	48.54	0.13	2	10.44	1.39	10.44	1.39	-	-
Apixaban	1,442	191.63	48.54	0.13	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	1,442	397.81	100.76	0.28	4	10.06	2.77	7.84	2.08	4.80 (0.54, 43.05)	0.161
Apixaban	1,442	451.85	114.45	0.31	1	2.21	0.69				

¹Conditional analysis includes informative events and person-time.

Table 16. Effect Estimates for Risk of Thromboembolic Stroke among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Sex

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Male											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	15,194	3,833.48	92.15	0.25	20	5.22	1.32	0.68	-0.03	1.05 (0.63, 1.75)	0.858
Apixaban	42,415	12,561.40	108.17	0.3	57	4.54	1.34				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	14,474	1,835.56	46.32	0.13	15	8.17	1.04	3.27	0.41	1.67 (0.73, 3.81)	0.226
Apixaban	14,474	1,835.56	46.32	0.13	9	4.9	0.62				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	14,474	3,660.76	92.38	0.25	20	5.46	1.38	1.94	0.35	1.43 (0.73, 2.80)	0.294
Apixaban	14,474	4,257.91	107.45	0.29	15	3.52	1.04				
Female											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	4,600	1,264.54	100.41	0.27	11	8.7	2.39	5.61	1.36	2.53 (1.19, 5.40)	0.016
Apixaban	17,514	5,819.21	121.36	0.33	18	3.09	1.03				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	4,402	596.66	49.51	0.14	5	8.38	1.14	5.03	0.68	2.50 (0.49, 12.89)	0.273
Apixaban	4,402	596.66	49.51	0.14	2	3.35	0.45				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	4,402	1,222.55	101.44	0.28	11	9	2.5	6.95	1.82	4.03 (1.12, 14.47)	0.033
Apixaban	4,402	1,466.13	121.65	0.33	3	2.05	0.68				

¹Conditional analysis includes informative events and person-time.

Table 17. Effect Estimates for Risk of Thromboembolic Stroke among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Age Group

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Age Group: 21-49 years											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	3,410	648.42	69.45	0.19	3	4.63	0.88	0.82	-0.02	1.27 (0.33, 4.85)	0.723
Apixaban	8,938	2,099.95	85.81	0.23	8	3.81	0.9				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	3,182	332.61	38.18	0.1	2	6.01	0.63	3.01	0.31	2.00 (0.18, 22.06)	0.571
Apixaban	3,182	332.61	38.18	0.1	1	3.01	0.31				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	3,182	607.27	69.71	0.19	3	4.94	0.94	3.55	0.63	3.67 (0.38, 35.39)	0.261
Apixaban	3,182	717.29	82.34	0.23	1	1.39	0.31				
Age Group: 50-64 years											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	16,384	4,449.59	99.2	0.27	28	6.29	1.71	2.18	0.4	1.37 (0.88, 2.13)	0.169
Apixaban	50,991	16,280.66	116.62	0.32	67	4.12	1.31				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	15,742	2,102.79	48.79	0.13	19	9.04	1.21	4.28	0.57	1.90 (0.88, 4.09)	0.1
Apixaban	15,742	2,102.79	48.79	0.13	10	4.76	0.64				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	15,742	4,283.81	99.39	0.27	28	6.54	1.78	3.17	0.7	1.77 (0.97, 3.23)	0.064
Apixaban	15,742	5,056.18	117.31	0.32	17	3.36	1.08				

¹Conditional analysis includes informative events and person-time.

Table 18. Effect Estimates for Risk of Thromboembolic Stroke among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
CHA₂DS₂VaSc Score: 0											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	4,041	864.37	78.13	0.21	3	3.47	0.74	2.06	0.41	2.57 (0.51, 12.84)	0.25
Apixaban	8,912	2,121.62	86.95	0.24	3	1.41	0.34				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	3,804	422.37	40.56	0.11	1	2.37	0.26	-2.37	-0.26	0.50 (0.05, 5.51)	0.571
Apixaban	3,804	422.37	40.56	0.11	2	4.74	0.53				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	3,804	815.75	78.33	0.21	3	3.68	0.79	0.38	0	1.15 (0.23, 5.72)	0.864
Apixaban	3,804	910.1	87.39	0.24	3	3.3	0.79				
CHA₂DS₂VaSc Score: 1											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	6,960	1,735.05	91.05	0.25	5	2.88	0.72	1.11	0.19	1.50 (0.51, 4.42)	0.465
Apixaban	18,799	5,644.10	109.66	0.3	10	1.77	0.53				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	6,625	848.38	46.77	0.13	3	3.54	0.45	1.18	0.15	1.50 (0.25, 8.98)	0.657
Apixaban	6,625	848.38	46.77	0.13	2	2.36	0.3				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	6,625	1,666.11	91.86	0.25	5	3	0.75	1.48	0.3	1.89 (0.45, 7.94)	0.384
Apixaban	6,625	1,969.67	108.59	0.3	3	1.52	0.45				
CHA₂DS₂VaSc Score: 2											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	3,914	1,098.46	102.51	0.28	5	4.55	1.28	0.25	-0.16	0.91 (0.34, 2.45)	0.851
Apixaban	13,191	4,414.61	122.24	0.33	19	4.3	1.44				

Table 18. Effect Estimates for Risk of Thromboembolic Stroke among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	3,671	492.02	48.95	0.13	4	8.13	1.09	4.06	0.54	2.00 (0.37, 10.92)	0.423
Apixaban	3,671	492.02	48.95	0.13	2	4.06	0.54				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	3,671	1,021.15	101.6	0.28	5	4.9	1.36	2.45	0.54	1.70 (0.41, 7.13)	0.466
Apixaban	3,671	1,223.85	121.77	0.33	3	2.45	0.82				
CHA₂DS₂VaSc Score: 3											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	2,774	813.22	107.08	0.29	4	4.92	1.44	0.02	-0.23	0.85 (0.28, 2.60)	0.776
Apixaban	8,379	2,858.53	124.61	0.34	14	4.9	1.67				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	2,477	351	51.76	0.14	4	11.4	1.61	2.85	0.4	1.33 (0.30, 5.96)	0.706
Apixaban	2,477	351	51.76	0.14	3	8.55	1.21				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	2,477	741.14	109.29	0.3	4	5.4	1.61	1.83	0.4	1.34 (0.30, 5.97)	0.705
Apixaban	2,477	840.55	123.95	0.34	3	3.57	1.21				
CHA₂DS₂VaSc Score: 4											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	1,459	407.05	101.9	0.28	7	17.2	4.8	11.54	2.92	2.84 (1.10, 7.31)	0.03
Apixaban	6,381	2,121.45	121.43	0.33	12	5.66	1.88				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	1,360	204.1	54.82	0.15	3	14.7	2.21	14.7	2.21	-	-
Apixaban	1,360	204.1	54.82	0.15	0	0	0				

Table 18. Effect Estimates for Risk of Thromboembolic Stroke among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	1,360	380.14	102.09	0.28	6	15.78	4.41	13.83	3.68	7.10 (0.85, 59.60)	0.071
Apixaban	1,360	511.09	137.26	0.38	1	1.96	0.74				
CHA₂DS₂VaSc Score: 5											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	479	134.29	102.4	0.28	5	37.23	10.44	28.61	7.93	4.48 (1.45, 13.85)	0.009
Apixaban	3,187	928.29	106.39	0.29	8	8.62	2.51				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	435	58.81	49.38	0.14	1	17	2.3	17	2.3	-	-
Apixaban	435	58.81	49.38	0.14	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	435	121.8	102.27	0.28	5	41.05	11.49	33.66	9.2	6.84 (0.80, 58.70)	0.08
Apixaban	435	135.26	113.57	0.31	1	7.39	2.3				
CHA₂DS₂VaSc Score: 6+											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	167	45.58	99.69	0.27	2	43.88	11.98	13.06	3.64	1.19 (0.26, 5.54)	0.825
Apixaban	1,080	291.99	98.75	0.27	9	30.82	8.33				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	146	20.96	52.45	0.14	2	95.42	13.7	95.42	13.7	-	-
Apixaban	146	20.96	52.45	0.14	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	146	41.44	103.68	0.28	2	48.26	13.7	48.26	13.7	-	-
Apixaban	146	47.35	118.46	0.32	0	0	0				

¹Conditional analysis includes informative events and person-time.

Table 19. Effect Estimates for Risk of Thromboembolic Stroke among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
HAS-BLED Score: 0											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	4,882	1,119.62	83.77	0.23	4	3.57	0.82	1.32	0.22	1.49 (0.43, 5.13)	0.524
Apixaban	11,721	3,110.11	96.92	0.27	7	2.25	0.6				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	4,649	537.99	42.27	0.12	2	3.72	0.43	-1.86	-0.22	0.67 (0.11, 3.99)	0.657
Apixaban	4,649	537.99	42.27	0.12	3	5.58	0.65				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	4,649	1,071.55	84.19	0.23	4	3.73	0.86	-0.44	-0.22	0.88 (0.23, 3.27)	0.843
Apixaban	4,649	1,199.34	94.23	0.26	5	4.17	1.08				
HAS-BLED Score: 1											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	9,587	2,586.85	98.55	0.27	16	6.19	1.67	3.69	0.86	2.22 (1.15, 4.29)	0.017
Apixaban	25,870	8,404.36	118.66	0.32	21	2.5	0.81				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	9,076	1,208.45	48.63	0.13	10	8.28	1.1	4.97	0.66	2.50 (0.78, 7.97)	0.121
Apixaban	9,076	1,208.45	48.63	0.13	4	3.31	0.44				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	9,076	2,450.67	98.62	0.27	16	6.53	1.76	4.48	1.1	2.89 (1.13, 7.40)	0.027
Apixaban	9,076	2,930.07	117.92	0.32	6	2.05	0.66				
HAS-BLED Score: 2											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	4,194	1,109.67	96.64	0.26	5	4.51	1.19	-1.39	-0.69	0.69 (0.27, 1.79)	0.446
Apixaban	15,911	5,090.82	116.86	0.32	30	5.89	1.89				

Table 19. Effect Estimates for Risk of Thromboembolic Stroke among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	3,904	530.91	49.67	0.14	3	5.65	0.77	1.88	0.26	1.50 (0.25, 8.98)	0.657
Apixaban	3,904	530.91	49.67	0.14	2	3.77	0.51				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	3,904	1,044.10	97.68	0.27	5	4.79	1.28	2.44	0.51	1.87 (0.45, 7.85)	0.392
Apixaban	3,904	1,275.66	119.35	0.33	3	2.35	0.77				
HAS-BLED Score: 3											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	967	250.34	94.56	0.26	5	19.97	5.17	13.08	3.23	2.25 (0.75, 6.75)	0.148
Apixaban	5,143	1,451.11	103.06	0.28	10	6.89	1.94				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	877	109.87	45.76	0.13	3	27.3	3.42	9.1	1.14	1.50 (0.25, 8.98)	0.657
Apixaban	877	109.87	45.76	0.13	2	18.2	2.28				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	877	230.8	96.12	0.26	5	21.66	5.7	13.85	3.42	2.33 (0.45, 12.17)	0.316
Apixaban	877	255.94	106.59	0.29	2	7.81	2.28				
HAS-BLED Score: 4+											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	164	31.53	70.23	0.19	1	31.72	6.1	10.12	0.65	1.35 (0.17, 11.07)	0.778
Apixaban	1,284	324.21	92.23	0.25	7	21.59	5.45				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	135	13.86	37.5	0.1	0	0	0	0	0	-	-
Apixaban	135	13.86	37.5	0.1	0	0	0				

Table 19. Effect Estimates for Risk of Thromboembolic Stroke among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	135	25.92	70.12	0.19	0	0	0	0	0	-	-
Apixaban	135	28.31	76.6	0.21	0	0	0				

¹Conditional analysis includes informative events and person-time.

Table 20. Effect Estimates for Risk of Major Extracranial Bleeding among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	46,957	14,705.44	114.38	0.31	149	10.13	3.17	3.44	1.45	1.58 (1.08, 2.29)	0.017
Dabigatran	19,735	5,079.71	94.01	0.26	34	6.69	1.72				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	19,478	2,512.43	47.11	0.13	30	11.94	1.54	3.58	0.46	1.43 (0.82, 2.50)	0.21
Dabigatran	19,478	2,512.43	47.11	0.13	21	8.36	1.08				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	19,478	6,102.81	114.44	0.31	52	8.52	2.67	1.73	0.92	1.33 (0.86, 2.05)	0.2
Dabigatran	19,478	5,010.43	93.96	0.26	34	6.79	1.75				

¹Conditional analysis includes informative events and person-time.

Table 21. Effect Estimates for Risk of Major Extracranial Bleeding among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Antiplatelets

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
No Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	42,557	13,211.18	113.39	0.31	118	8.93	2.77	3.14	1.29	1.59 (1.05, 2.42)	0.029
Dabigatran	18,180	4,659.12	93.61	0.26	27	5.8	1.49				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	17,874	2,302.68	47.05	0.13	27	11.73	1.51	4.78	0.62	1.69 (0.91, 3.13)	0.097
Dabigatran	17,874	2,302.68	47.05	0.13	16	6.95	0.9				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	17,874	5,547.49	113.36	0.31	43	7.75	2.41	1.86	0.9	1.38 (0.85, 2.23)	0.194
Dabigatran	17,874	4,581.04	93.61	0.26	27	5.89	1.51				
Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	4,400	1,494.26	124.04	0.34	31	20.75	7.05	4.1	2.54	1.34 (0.59, 3.06)	0.48
Dabigatran	1,555	420.59	98.79	0.27	7	16.64	4.5				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	1,452	206.35	51.91	0.14	6	29.08	4.13	-4.85	-0.69	0.86 (0.29, 2.55)	0.782
Dabigatran	1,452	206.35	51.91	0.14	7	33.92	4.82				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	1,452	508.68	127.96	0.35	9	17.69	6.2	-0.08	1.38	1.14 (0.42, 3.07)	0.799
Dabigatran	1,452	393.84	99.07	0.27	7	17.77	4.82				

¹Conditional analysis includes informative events and person-time.

Table 22. Effect Estimates for Risk of Major Extracranial Bleeding among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Sex

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Male											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	35,054	10,705.82	111.55	0.31	93	8.69	2.65	2.67	1.14	1.53 (0.97, 2.42)	0.069
Dabigatran	15,155	3,821.44	92.1	0.25	23	6.02	1.52				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	14,863	1,903.58	46.78	0.13	23	12.08	1.55	3.15	0.4	1.35 (0.72, 2.53)	0.345
Dabigatran	14,863	1,903.58	46.78	0.13	17	8.93	1.14				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	14,863	4,585.12	112.68	0.31	35	7.63	2.35	1.49	0.81	1.35 (0.80, 2.29)	0.26
Dabigatran	14,863	3,743.03	91.98	0.25	23	6.14	1.55				
Female											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	11,903	3,999.62	122.73	0.34	56	14	4.7	5.26	2.3	1.61 (0.84, 3.08)	0.147
Dabigatran	4,580	1,258.27	100.35	0.27	11	8.74	2.4				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	4,452	596.16	48.91	0.13	8	13.42	1.8	3.35	0.45	1.33 (0.46, 3.84)	0.594
Dabigatran	4,452	596.16	48.91	0.13	6	10.06	1.35				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	4,452	1,471.37	120.71	0.33	17	11.55	3.82	2.6	1.35	1.30 (0.61, 2.78)	0.496
Dabigatran	4,452	1,229.01	100.83	0.28	11	8.95	2.47				

¹Conditional analysis includes informative events and person-time.

Table 23. Effect Estimates for Risk of Major Extracranial Bleeding among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Age Group

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Age Group: 21-49 years											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	7,914	1,857.25	85.72	0.23	12	6.46	1.52	-2.8	-0.25	0.73 (0.27, 1.95)	0.527
Dabigatran	3,406	648.15	69.51	0.19	6	9.26	1.76				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	3,235	347.98	39.29	0.11	3	8.62	0.93	-2.87	-0.31	0.75 (0.17, 3.35)	0.706
Dabigatran	3,235	347.98	39.29	0.11	4	11.49	1.24				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	3,235	764.48	86.31	0.24	5	6.54	1.55	-3.23	-0.31	0.75 (0.23, 2.46)	0.635
Dabigatran	3,235	614.2	69.35	0.19	6	9.77	1.85				
Age Group: 50-64 years											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	39,043	12,848.19	120.2	0.33	137	10.66	3.51	4.34	1.79	1.77 (1.18, 2.66)	0.006
Dabigatran	16,329	4,431.56	99.13	0.27	28	6.32	1.71				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	16,050	2,155.28	49.05	0.13	26	12.06	1.62	4.18	0.56	1.53 (0.83, 2.82)	0.173
Dabigatran	16,050	2,155.28	49.05	0.13	17	7.89	1.06				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	16,050	5,292.25	120.44	0.33	47	8.88	2.93	2.44	1.18	1.46 (0.91, 2.33)	0.114
Dabigatran	16,050	4,347.33	98.93	0.27	28	6.44	1.74				

¹Conditional analysis includes informative events and person-time.

Table 24. Effect Estimates for Risk of Major Extracranial Bleeding among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
CHA₂DS₂VaSc Score: 0											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	8,747	2,145.82	89.6	0.25	9	4.19	1.03	-5.09	-0.96	0.45 (0.18, 1.18)	0.106
Dabigatran	4,031	862.06	78.11	0.21	8	9.28	1.98				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	3,901	443.68	41.54	0.11	2	4.51	0.51	-9.02	-1.03	0.33 (0.07, 1.65)	0.178
Dabigatran	3,901	443.68	41.54	0.11	6	13.52	1.54				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	3,901	954.68	89.39	0.24	3	3.14	0.77	-6.46	-1.28	0.33 (0.09, 1.25)	0.104
Dabigatran	3,901	832.88	77.98	0.21	8	9.61	2.05				
CHA₂DS₂VaSc Score: 1											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	16,216	5,002.89	112.69	0.31	42	8.4	2.59	5.5	1.87	3.02 (1.19, 7.66)	0.02
Dabigatran	6,940	1,728.85	90.99	0.25	5	2.89	0.72				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	6,713	854.5	46.49	0.13	10	11.7	1.49	7.02	0.89	2.50 (0.78, 7.97)	0.121
Dabigatran	6,713	854.5	46.49	0.13	4	4.68	0.6				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	6,713	2,079.71	113.16	0.31	20	9.62	2.98	6.64	2.23	3.47 (1.30, 9.26)	0.013
Dabigatran	6,713	1,679.01	91.35	0.25	5	2.98	0.74				
CHA₂DS₂VaSc Score: 2											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	9,535	3,314.78	126.98	0.35	34	10.26	3.57	3.85	1.77	1.69 (0.75, 3.82)	0.208
Dabigatran	3,902	1,092.18	102.23	0.28	7	6.41	1.79				

Table 24. Effect Estimates for Risk of Major Extracranial Bleeding among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	3,706	509.88	50.25	0.14	6	11.77	1.62	1.96	0.27	1.20 (0.37, 3.93)	0.763
Dabigatran	3,706	509.88	50.25	0.14	5	9.81	1.35				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	3,706	1,297.62	127.89	0.35	11	8.48	2.97	1.71	1.08	1.29 (0.50, 3.33)	0.604
Dabigatran	3,706	1,033.68	101.88	0.28	7	6.77	1.89				
CHA₂DS₂VaSc Score: 3											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	6,311	2,283.32	132.15	0.36	21	9.2	3.33	7.96	2.97	7.93 (1.07, 59.08)	0.043
Dabigatran	2,766	810.68	107.05	0.29	1	1.23	0.36				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	2,678	391.27	53.37	0.15	1	2.56	0.37	0	0	1.00 (0.06, 15.99)	1
Dabigatran	2,678	391.27	53.37	0.15	1	2.56	0.37				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	2,678	981.78	133.9	0.37	5	5.09	1.87	3.83	1.49	4.32 (0.50, 37.07)	0.182
Dabigatran	2,678	789.37	107.66	0.29	1	1.27	0.37				
CHA₂DS₂VaSc Score: 4											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	4,065	1,349.98	121.3	0.33	25	18.52	6.15	-8.51	-1.42	0.68 (0.33, 1.40)	0.295
Dabigatran	1,454	407.01	102.24	0.28	11	27.03	7.57				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	1,375	189.02	50.21	0.14	7	37.03	5.09	5.29	0.73	1.17 (0.39, 3.47)	0.782
Dabigatran	1,375	189.02	50.21	0.14	6	31.74	4.36				

Table 24. Effect Estimates for Risk of Major Extracranial Bleeding among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	1,375	458.51	121.8	0.33	9	19.63	6.55	-6.14	-0.73	0.81 (0.33, 2.01)	0.653
Dabigatran	1,375	388.02	103.07	0.28	10	25.77	7.27				
CHA₂DS₂VaSc Score: 5											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	1,618	486.57	109.84	0.3	13	26.72	8.03	11.7	3.84	1.80 (0.40, 8.00)	0.44
Dabigatran	477	133.18	101.98	0.28	2	15.02	4.19				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	424	57.55	49.58	0.14	2	34.75	4.72	17.38	2.36	2.00 (0.18, 22.06)	0.571
Dabigatran	424	57.55	49.58	0.14	1	17.38	2.36				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	424	133.24	114.78	0.31	2	15.01	4.72	-1.98	0	0.82 (0.12, 5.84)	0.845
Dabigatran	424	117.7	101.39	0.28	2	16.99	4.72				
CHA₂DS₂VaSc Score: 6+											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	465	122.08	95.89	0.26	5	40.96	10.75	40.96	10.75	-	-
Dabigatran	165	45.74	101.24	0.28	0	0	0				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	142	16.92	43.53	0.12	0	0	0	0	0	-	-
Dabigatran	142	16.92	43.53	0.12	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	142	34.69	89.23	0.24	1	28.83	7.04	28.83	7.04	-	-
Dabigatran	142	37.95	97.63	0.27	0	0	0				

¹Conditional analysis includes informative events and person-time.

Table 25. Effect Estimates for Risk of Major Extracranial Bleeding among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
HAS-BLED Score: 0											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	10,799	2,869.67	97.06	0.27	17	5.92	1.57	-1.25	-0.07	0.83 (0.36, 1.94)	0.674
Dabigatran	4,867	1,115.44	83.71	0.23	8	7.17	1.64				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	4,727	555.28	42.91	0.12	1	1.8	0.21	-7.2	-0.85	0.20 (0.02, 1.71)	0.142
Dabigatran	4,727	555.28	42.91	0.12	5	9	1.06				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	4,727	1,228.28	94.91	0.26	4	3.26	0.85	-4.11	-0.85	0.47 (0.14, 1.55)	0.214
Dabigatran	4,727	1,085.45	83.87	0.23	8	7.37	1.69				
HAS-BLED Score: 1											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	21,938	7,256.82	120.82	0.33	51	7.03	2.32	1.61	0.86	1.33 (0.74, 2.41)	0.343
Dabigatran	9,562	2,582.38	98.64	0.27	14	5.42	1.46				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	9,259	1,231.98	48.6	0.13	13	10.55	1.4	4.06	0.54	1.62 (0.67, 3.92)	0.28
Dabigatran	9,259	1,231.98	48.6	0.13	8	6.49	0.86				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	9,259	3,080.67	121.53	0.33	19	6.17	2.05	0.57	0.54	1.17 (0.58, 2.33)	0.659
Dabigatran	9,259	2,500.84	98.65	0.27	14	5.6	1.51				
HAS-BLED Score: 2											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	10,990	3,649.98	121.31	0.33	58	15.89	5.28	9.54	3.6	2.73 (1.25, 6.00)	0.012
Dabigatran	4,182	1,102.11	96.26	0.26	7	6.35	1.67				

Table 25. Effect Estimates for Risk of Major Extracranial Bleeding among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	4,006	531.82	48.49	0.13	9	16.92	2.25	5.64	0.75	1.50 (0.53, 4.21)	0.442
Dabigatran	4,006	531.82	48.49	0.13	6	11.28	1.5				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	4,006	1,339.57	122.14	0.33	20	14.93	4.99	8.24	3.25	2.47 (1.04, 5.84)	0.04
Dabigatran	4,006	1,046.69	95.43	0.26	7	6.69	1.75				
HAS-BLED Score: 3											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	2,724	807.35	108.25	0.3	16	19.82	5.87	3.81	1.72	1.23 (0.41, 3.70)	0.713
Dabigatran	964	249.93	94.7	0.26	4	16	4.15				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	884	116.42	48.1	0.13	5	42.95	5.66	25.77	3.39	2.50 (0.49, 12.89)	0.273
Dabigatran	884	116.42	48.1	0.13	2	17.18	2.26				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	884	277.2	114.53	0.31	7	25.25	7.92	8	3.39	1.54 (0.44, 5.33)	0.499
Dabigatran	884	231.82	95.78	0.26	4	17.25	4.52				
HAS-BLED Score: 4+											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	506	121.62	87.79	0.24	7	57.56	13.83	24.06	7.58	1.85 (0.22, 15.26)	0.569
Dabigatran	160	29.85	68.14	0.19	1	33.5	6.25				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	126	13.14	38.1	0.1	0	0	0	-76.1	-7.94	-	-
Dabigatran	126	13.14	38.1	0.1	1	76.1	7.94				

Table 25. Effect Estimates for Risk of Major Extracranial Bleeding among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	126	27.23	78.93	0.22	0	0	0	-40.21	-7.94	-	-
Dabigatran	126	24.87	72.1	0.2	1	40.21	7.94				

¹Conditional analysis includes informative events and person-time.

Table 26. Effect Estimates for Risk of Major Extracranial Bleeding among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	47,405	14,822.65	114.21	0.31	150	10.12	3.16				
Apixaban	59,652	18,323.76	112.2	0.31	97	5.29	1.63	4.83	1.54	1.96 (1.52, 2.53)	<0.001
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	45,490	6,412.05	51.48	0.14	84	13.1	1.85				
Apixaban	45,490	6,412.05	51.48	0.14	34	5.3	0.75	7.8	1.1	2.47 (1.66, 3.68)	<0.001
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	45,490	14,293.86	114.77	0.31	143	10	3.14				
Apixaban	45,490	14,013.14	112.51	0.31	67	4.78	1.47	5.22	1.67	2.12 (1.58, 2.83)	<0.001

¹Conditional analysis includes informative events and person-time.

Table 27. Effect Estimates for Risk of Major Extracranial Bleeding among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Antiplatelets

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
No Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	42,998	13,324.65	113.19	0.31	118	8.86	2.74	4.1	1.29	1.89 (1.42, 2.52)	<0.001
Apixaban	52,362	15,983.64	111.49	0.31	76	4.75	1.45				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	40,966	5,741.25	51.19	0.14	59	10.28	1.44	5.05	0.71	1.97 (1.27, 3.05)	0.003
Apixaban	40,966	5,741.25	51.19	0.14	30	5.23	0.73				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	40,966	12,772.52	113.88	0.31	110	8.61	2.69	4.22	1.34	1.98 (1.43, 2.73)	<0.001
Apixaban	40,966	12,515.94	111.59	0.31	55	4.39	1.34				
Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	4,407	1,498.00	124.15	0.34	32	21.36	7.26	12.39	4.38	2.54 (1.47, 4.41)	<0.001
Apixaban	7,290	2,340.13	117.25	0.32	21	8.97	2.88				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	4,220	666.64	57.7	0.16	24	36	5.69	27	4.27	4.00 (1.64, 9.79)	0.002
Apixaban	4,220	666.64	57.7	0.16	6	9	1.42				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	4,220	1,433.73	124.09	0.34	32	22.32	7.58	13.79	4.74	2.68 (1.38, 5.21)	0.004
Apixaban	4,220	1,407.00	121.78	0.33	12	8.53	2.84				

¹Conditional analysis includes informative events and person-time.

Table 28. Effect Estimates for Risk of Major Extracranial Bleeding among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Sex

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Male											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	35,418	10,809.59	111.47	0.31	94	8.7	2.65	3.67	1.16	1.77 (1.29, 2.44)	<0.001
Apixaban	42,211	12,534.61	108.46	0.3	63	5.03	1.49				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	33,516	4,661.15	50.8	0.14	50	10.73	1.49	5.79	0.81	2.17 (1.33, 3.56)	0.002
Apixaban	33,516	4,661.15	50.8	0.14	23	4.93	0.69				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	33,516	10,278.93	112.02	0.31	89	8.66	2.66	3.75	1.19	1.79 (1.26, 2.54)	0.001
Apixaban	33,516	9,981.14	108.77	0.3	49	4.91	1.46				
Female											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	11,987	4,013.06	122.28	0.33	56	13.95	4.67	8.08	2.72	2.44 (1.59, 3.74)	<0.001
Apixaban	17,441	5,789.15	121.24	0.33	34	5.87	1.95				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	11,719	1,747.43	54.46	0.15	31	17.74	2.65	12.59	1.88	3.44 (1.64, 7.23)	0.001
Apixaban	11,719	1,747.43	54.46	0.15	9	5.15	0.77				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	11,719	3,933.26	122.59	0.34	54	13.73	4.61	9.17	3.07	3.02 (1.77, 5.16)	<0.001
Apixaban	11,719	3,950.75	123.13	0.34	18	4.56	1.54				

¹Conditional analysis includes informative events and person-time.

Table 29. Effect Estimates for Risk of Major Extracranial Bleeding among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Age Group

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Age Group: 21-49 years											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	7,982	1,871.33	85.63	0.23	12	6.41	1.5	2.59	0.61	1.79 (0.73, 4.38)	0.204
Apixaban	8,905	2,095.07	85.93	0.24	8	3.82	0.9				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	7,219	824.65	41.72	0.11	5	6.06	0.69	3.64	0.42	2.50 (0.49, 12.89)	0.273
Apixaban	7,219	824.65	41.72	0.11	2	2.43	0.28				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	7,219	1,707.68	86.4	0.24	10	5.86	1.39	4.07	0.97	3.42 (0.94, 12.44)	0.062
Apixaban	7,219	1,681.92	85.1	0.23	3	1.78	0.42				
Age Group: 50-64 years											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	39,423	12,951.33	119.99	0.33	138	10.66	3.5	5.17	1.75	1.99 (1.52, 2.60)	<0.001
Apixaban	50,747	16,228.69	116.81	0.32	89	5.48	1.75				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	37,839	5,542.52	53.5	0.15	74	13.35	1.96	7.76	1.14	2.39 (1.57, 3.63)	<0.001
Apixaban	37,839	5,542.52	53.5	0.15	31	5.59	0.82				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	37,839	12,454.42	120.22	0.33	130	10.44	3.44	5.2	1.74	2.01 (1.49, 2.71)	<0.001
Apixaban	37,839	12,221.01	117.97	0.32	64	5.24	1.69				

¹Conditional analysis includes informative events and person-time.

Table 30. Effect Estimates for Risk of Major Extracranial Bleeding among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
CHA₂DS₂VaSc Score: 0											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	8,885	2,181.34	89.67	0.25	8	3.67	0.9	0.37	0.11	1.08 (0.39, 2.99)	0.883
Apixaban	8,870	2,120.39	87.31	0.24	7	3.3	0.79				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	8,144	953.42	42.76	0.12	3	3.15	0.37	2.1	0.25	3.00 (0.31, 28.84)	0.341
Apixaban	8,144	953.42	42.76	0.12	1	1.05	0.12				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	8,144	2,003.07	89.84	0.25	7	3.49	0.86	-0.11	0	0.96 (0.33, 2.73)	0.932
Apixaban	8,144	1,940.16	87.01	0.24	7	3.61	0.86				
CHA₂DS₂VaSc Score: 1											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	16,403	5,049.17	112.43	0.31	43	8.52	2.62	5.14	1.61	2.53 (1.47, 4.34)	<0.001
Apixaban	18,714	5,631.50	109.91	0.3	19	3.37	1.02				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	15,545	2,185.02	51.34	0.14	20	9.15	1.29	6.86	0.96	4.00 (1.50, 10.66)	0.006
Apixaban	15,545	2,185.02	51.34	0.14	5	2.29	0.32				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	15,545	4,834.98	113.6	0.31	41	8.48	2.64	5.93	1.87	3.35 (1.76, 6.39)	<0.001
Apixaban	15,545	4,698.24	110.39	0.3	12	2.55	0.77				
CHA₂DS₂VaSc Score: 2											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	9,599	3,327.22	126.6	0.35	34	10.22	3.54	3.16	1.18	1.48 (0.91, 2.41)	0.116
Apixaban	13,121	4,389.92	122.2	0.33	31	7.06	2.36				

Table 30. Effect Estimates for Risk of Major Extracranial Bleeding among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	9,198	1,403.61	55.74	0.15	21	14.96	2.28	7.12	1.09	1.91 (0.92, 3.96)	0.082
Apixaban	9,198	1,403.61	55.74	0.15	11	7.84	1.2				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	9,198	3,190.49	126.69	0.35	33	10.34	3.59	3.95	1.41	1.63 (0.94, 2.84)	0.084
Apixaban	9,198	3,126.85	124.17	0.34	20	6.4	2.17				
CHA₂DS₂VaSc Score: 3											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	6,345	2,295.18	132.12	0.36	21	9.15	3.31	3.53	1.39	1.68 (0.88, 3.23)	0.119
Apixaban	8,343	2,847.59	124.67	0.34	16	5.62	1.92				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	5,860	928.84	57.89	0.16	12	12.92	2.05	2.15	0.34	1.20 (0.52, 2.78)	0.67
Apixaban	5,860	928.84	57.89	0.16	10	10.77	1.71				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	5,860	2,133.72	132.99	0.36	17	7.97	2.9	1.1	0.51	1.19 (0.59, 2.41)	0.635
Apixaban	5,860	2,037.89	127.02	0.35	14	6.87	2.39				
CHA₂DS₂VaSc Score: 4											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	4,092	1,357.19	121.14	0.33	26	19.16	6.35	14.91	4.94	4.51 (2.11, 9.65)	<0.001
Apixaban	6,369	2,117.74	121.45	0.33	9	4.25	1.41				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	3,956	606.81	56.03	0.15	15	24.72	3.79	19.78	3.03	5.00 (1.45, 17.27)	0.011
Apixaban	3,956	606.81	56.03	0.15	3	4.94	0.76				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	3,956	1,314.21	121.34	0.33	25	19.02	6.32	13.9	4.55	3.59 (1.55, 8.30)	0.003
Apixaban	3,956	1,365.61	126.08	0.35	7	5.13	1.77				
CHA₂DS₂VaSc Score: 5											
Unmatched Analysis (Site-adjusted only)											

Table 30. Effect Estimates for Risk of Major Extracranial Bleeding among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Rivaroxaban	1,617	488.93	110.44	0.3	13	26.59	8.04				
Apixaban	3,159	924.17	106.85	0.29	11	11.9	3.48	14.69	4.56	2.31 (1.03, 5.16)	0.041
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	1,552	216.67	50.99	0.14	7	32.31	4.51				
Apixaban	1,552	216.67	50.99	0.14	4	18.46	2.58	13.85	1.93	1.75 (0.51, 5.98)	0.372
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	1,552	474.03	111.56	0.31	13	27.42	8.38				
Apixaban	1,552	482.89	113.64	0.31	5	10.35	3.22	17.07	5.15	2.55 (0.91, 7.14)	0.076
CHA₂DS₂VaSc Score: 6+											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	464	123.62	97.31	0.27	5	40.45	10.78				
Apixaban	1,076	292.45	99.27	0.27	4	13.68	3.72	26.77	7.06	2.89 (0.78, 10.78)	0.114
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	405	55.44	50	0.14	3	54.11	7.41				
Apixaban	405	55.44	50	0.14	0	0	0	54.11	7.41	-	-
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	405	111.35	100.42	0.27	5	44.9	12.35				
Apixaban	405	117.04	105.55	0.29	1	8.54	2.47	36.36	9.88	4.85 (0.56, 41.73)	0.151

¹Conditional analysis includes informative events and person-time.

Table 31. Effect Estimates for Risk of Major Extracranial Bleeding among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
HAS-BLED Score: 0											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	10,942	2,901.44	96.85	0.27	16	5.51	1.46	2.61	0.69	1.90 (0.84, 4.31)	0.123
Apixaban	11,666	3,103.36	97.16	0.27	9	2.9	0.77				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	10,183	1,269.64	45.54	0.12	6	4.73	0.59	4.73	0.59	-	-
Apixaban	10,183	1,269.64	45.54	0.12	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	10,183	2,721.36	97.61	0.27	14	5.14	1.37	2.9	0.79	2.31 (0.89, 6.02)	0.086
Apixaban	10,183	2,673.74	95.9	0.26	6	2.24	0.59				
HAS-BLED Score: 1											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	22,157	7,307.11	120.45	0.33	51	6.98	2.3	4.35	1.45	2.67 (1.62, 4.41)	<0.001
Apixaban	25,766	8,381.53	118.81	0.33	22	2.62	0.85				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	20,948	3,085.16	53.79	0.15	21	6.81	1	3.24	0.48	1.91 (0.92, 3.96)	0.082
Apixaban	20,948	3,085.16	53.79	0.15	11	3.57	0.53				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	20,948	6,955.76	121.28	0.33	48	6.9	2.29	4.12	1.38	2.49 (1.46, 4.23)	<0.001
Apixaban	20,948	6,830.51	119.1	0.33	19	2.78	0.91				
HAS-BLED Score: 2											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	11,065	3,677.66	121.4	0.33	60	16.31	5.42	8.23	2.83	2.06 (1.38, 3.06)	<0.001
Apixaban	15,842	5,068.58	116.86	0.32	41	8.09	2.59				

Table 31. Effect Estimates for Risk of Major Extracranial Bleeding among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	10,630	1,570.49	53.96	0.15	32	20.38	3.01	10.19	1.51	2.00 (1.10, 3.64)	0.024
Apixaban	10,630	1,570.49	53.96	0.15	16	10.19	1.51				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	10,630	3,529.41	121.27	0.33	57	16.15	5.36	7.7	2.63	1.94 (1.24, 3.03)	0.004
Apixaban	10,630	3,433.44	117.97	0.32	29	8.45	2.73				
HAS-BLED Score: 3											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	2,738	815.07	108.73	0.3	16	19.63	5.84	6.51	2.12	1.56 (0.80, 3.04)	0.192
Apixaban	5,102	1,447.80	103.65	0.28	19	13.12	3.72				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	2,647	360.03	49.68	0.14	11	30.55	4.16	11.11	1.51	1.57 (0.61, 4.05)	0.35
Apixaban	2,647	360.03	49.68	0.14	7	19.44	2.64				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	2,647	788.07	108.74	0.3	16	20.3	6.04	6.37	1.89	1.45 (0.67, 3.12)	0.346
Apixaban	2,647	789.43	108.93	0.3	11	13.93	4.16				
HAS-BLED Score: 4+											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	503	121.39	88.14	0.24	7	57.67	13.92	39.06	9.21	3.05 (1.02, 9.09)	0.045
Apixaban	1,276	322.5	92.31	0.25	6	18.6	4.7				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	466	52.24	40.94	0.11	4	76.57	8.58	57.43	6.44	4.00 (0.45, 35.79)	0.215
Apixaban	466	52.24	40.94	0.11	1	19.14	2.15				

Table 31. Effect Estimates for Risk of Major Extracranial Bleeding among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	466	112.79	88.41	0.24	6	53.2	12.88	36.41	8.58	3.04 (0.61, 15.07)	0.174
Apixaban	466	119.16	93.4	0.26	2	16.78	4.29				

¹Conditional analysis includes informative events and person-time.

Table 32. Effect Estimates for Risk of Major Extracranial Bleeding among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Unmatched Analysis (Site-adjusted only)											
Dabigatran	19,794	5,098.02	94.07	0.26	34	6.67	1.72	1.34	0.08	1.23 (0.83, 1.83)	0.297
Apixaban	59,929	18,380.61	112.02	0.31	98	5.33	1.64				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	19,168	2,465.18	46.97	0.13	24	9.74	1.25	4.46	0.57	1.85 (0.94, 3.63)	0.075
Apixaban	19,168	2,465.18	46.97	0.13	13	5.27	0.68				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	19,168	4,950.75	94.34	0.26	34	6.87	1.77	2.58	0.47	1.54 (0.92, 2.58)	0.103
Apixaban	19,168	5,826.51	111.03	0.3	25	4.29	1.3				

¹Conditional analysis includes informative events and person-time.

Table 33. Effect Estimates for Risk of Major Extracranial Bleeding among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Antiplatelets

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
No Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	18,235	4,674.70	93.63	0.26	27	5.78	1.48	0.97	0.02	1.17 (0.75, 1.81)	0.492
Apixaban	52,576	16,023.68	111.32	0.3	77	4.81	1.46				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	17,571	2,253.49	46.84	0.13	16	7.1	0.91	2.66	0.34	1.60 (0.73, 3.53)	0.244
Apixaban	17,571	2,253.49	46.84	0.13	10	4.44	0.57				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	17,571	4,513.30	93.82	0.26	27	5.98	1.54	2.42	0.46	1.63 (0.91, 2.94)	0.101
Apixaban	17,571	5,333.79	110.87	0.3	19	3.56	1.08				
Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	1,559	423.32	99.18	0.27	7	16.54	4.49	7.63	1.63	1.89 (0.80, 4.47)	0.145
Apixaban	7,353	2,356.93	117.08	0.32	21	8.91	2.86				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	1,442	191.63	48.54	0.13	4	20.87	2.77	10.44	1.39	2.00 (0.37, 10.92)	0.423
Apixaban	1,442	191.63	48.54	0.13	2	10.44	1.39				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	1,442	397.81	100.76	0.28	6	15.08	4.16	4.02	0.69	1.28 (0.39, 4.21)	0.68
Apixaban	1,442	451.85	114.45	0.31	5	11.07	3.47				

¹Conditional analysis includes informative events and person-time.

Table 34. Effect Estimates for Risk of Major Extracranial Bleeding among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Sex

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Male											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	15,194	3,833.48	92.15	0.25	23	6	1.51	0.9	0	1.18 (0.73, 1.91)	0.499
Apixaban	42,415	12,561.40	108.17	0.3	64	5.09	1.51				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	14,474	1,835.56	46.32	0.13	16	8.72	1.11	3.81	0.48	1.78 (0.79, 4.02)	0.167
Apixaban	14,474	1,835.56	46.32	0.13	9	4.9	0.62				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	14,474	3,660.76	92.38	0.25	22	6.01	1.52	2.25	0.41	1.52 (0.80, 2.90)	0.202
Apixaban	14,474	4,257.91	107.45	0.29	16	3.76	1.11				
Female											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	4,600	1,264.54	100.41	0.27	11	8.7	2.39	2.86	0.45	1.43 (0.72, 2.83)	0.306
Apixaban	17,514	5,819.21	121.36	0.33	34	5.84	1.94				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	4,402	596.66	49.51	0.14	8	13.41	1.82	8.38	1.14	2.67 (0.71, 10.05)	0.147
Apixaban	4,402	596.66	49.51	0.14	3	5.03	0.68				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	4,402	1,222.55	101.44	0.28	11	9	2.5	2.86	0.45	1.42 (0.59, 3.44)	0.435
Apixaban	4,402	1,466.13	121.65	0.33	9	6.14	2.04				

¹Conditional analysis includes informative events and person-time.

Table 35. Effect Estimates for Risk of Major Extracranial Bleeding among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Age Group

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Age Group: 21-49 years											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	3,410	648.42	69.45	0.19	6	9.25	1.76	5.44	0.86	2.45 (0.84, 7.16)	0.1
Apixaban	8,938	2,099.95	85.81	0.23	8	3.81	0.9				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	3,182	332.61	38.18	0.1	5	15.03	1.57	12.03	1.26	5.00 (0.58, 42.80)	0.142
Apixaban	3,182	332.61	38.18	0.1	1	3.01	0.31				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	3,182	607.27	69.71	0.19	6	9.88	1.89	7.09	1.26	3.32 (0.67, 16.47)	0.143
Apixaban	3,182	717.29	82.34	0.23	2	2.79	0.63				
Age Group: 50-64 years											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	16,384	4,449.59	99.2	0.27	28	6.29	1.71	0.76	-0.06	1.12 (0.73, 1.71)	0.608
Apixaban	50,991	16,280.66	116.62	0.32	90	5.53	1.77				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	15,742	2,102.79	48.79	0.13	19	9.04	1.21	4.28	0.57	1.90 (0.88, 4.09)	0.1
Apixaban	15,742	2,102.79	48.79	0.13	10	4.76	0.64				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	15,742	4,283.81	99.39	0.27	28	6.54	1.78	1.99	0.32	1.38 (0.79, 2.39)	0.255
Apixaban	15,742	5,056.18	117.31	0.32	23	4.55	1.46				

¹Conditional analysis includes informative events and person-time.

Table 36. Effect Estimates for Risk of Major Extracranial Bleeding among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
CHA₂DS₂VaSc Score: 0											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	4,041	864.37	78.13	0.21	8	9.26	1.98	5.96	1.19	3.14 (1.13, 8.71)	0.028
Apixaban	8,912	2,121.62	86.95	0.24	7	3.3	0.79				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	3,804	422.37	40.56	0.11	6	14.21	1.58	11.84	1.31	6.00 (0.72, 49.84)	0.097
Apixaban	3,804	422.37	40.56	0.11	1	2.37	0.26				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	3,804	815.75	78.33	0.21	8	9.81	2.1	6.51	1.31	3.01 (0.80, 11.38)	0.104
Apixaban	3,804	910.1	87.39	0.24	3	3.3	0.79				
CHA₂DS₃VaSc Score: 1											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	6,960	1,735.05	91.05	0.25	5	2.88	0.72	-0.48	-0.29	0.85 (0.32, 2.29)	0.746
Apixaban	18,799	5,644.10	109.66	0.3	19	3.37	1.01				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	6,625	848.38	46.77	0.13	3	3.54	0.45	1.18	0.15	1.50 (0.25, 8.98)	0.657
Apixaban	6,625	848.38	46.77	0.13	2	2.36	0.3				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	6,625	1,666.11	91.86	0.25	5	3	0.75	0.46	0	1.16 (0.33, 4.01)	0.818
Apixaban	6,625	1,969.67	108.59	0.3	5	2.54	0.75				
CHA₂DS₃VaSc Score: 2											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	3,914	1,098.46	102.51	0.28	7	6.37	1.79	-0.65	-0.56	0.86 (0.38, 1.95)	0.712
Apixaban	13,191	4,414.61	122.24	0.33	31	7.02	2.35				

Table 36. Effect Estimates for Risk of Major Extracranial Bleeding among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	3,671	492.02	48.95	0.13	5	10.16	1.36	-2.03	-0.27	0.83 (0.25, 2.73)	0.763
Apixaban	3,671	492.02	48.95	0.13	6	12.19	1.63				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	3,671	1,021.15	101.6	0.28	7	6.86	1.91	0.32	-0.27	1.02 (0.37, 2.83)	0.966
Apixaban	3,671	1,223.85	121.77	0.33	8	6.54	2.18				
CHA₂DS₂VaSc Score: 3											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	2,774	813.22	107.08	0.29	1	1.23	0.36	-4.72	-1.67	0.20 (0.03, 1.51)	0.118
Apixaban	8,379	2,858.53	124.61	0.34	17	5.95	2.03				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	2,477	351	51.76	0.14	0	0	0	0	0	-	-
Apixaban	2,477	351	51.76	0.14	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	2,477	741.14	109.29	0.3	1	1.35	0.4	-3.41	-1.21	0.28 (0.03, 2.52)	0.256
Apixaban	2,477	840.55	123.95	0.34	4	4.76	1.61				
CHA₂DS₂VaSc Score: 4											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	1,459	407.05	101.9	0.28	11	27.02	7.54	22.78	6.13	6.44 (2.64, 15.73)	<0.001
Apixaban	6,381	2,121.45	121.43	0.33	9	4.24	1.41				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	1,360	204.1	54.82	0.15	9	44.1	6.62	29.4	4.41	3.00 (0.81, 11.08)	0.099
Apixaban	1,360	204.1	54.82	0.15	3	14.7	2.21				

Table 36. Effect Estimates for Risk of Major Extracranial Bleeding among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	1,360	380.14	102.09	0.28	11	28.94	8.09				
Apixaban	1,360	511.09	137.26	0.38	3	5.87	2.21	23.07	5.88	4.14 (1.15, 14.91)	0.03
CHA₂DS₂VaSc Score: 5											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	479	134.29	102.4	0.28	2	14.89	4.18				
Apixaban	3,187	928.29	106.39	0.29	11	11.85	3.45	3.04	0.72	1.30 (0.29, 5.93)	0.733
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	435	58.81	49.38	0.14	1	17	2.3				
Apixaban	435	58.81	49.38	0.14	2	34.01	4.6	-17	-2.3	0.50 (0.05, 5.51)	0.571
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	435	121.8	102.27	0.28	2	16.42	4.6				
Apixaban	435	135.26	113.57	0.31	2	14.79	4.6	1.63	0	1.12 (0.16, 8.04)	0.912
CHA₂DS₂VaSc Score: 6+											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	167	45.58	99.69	0.27	0	0	0				
Apixaban	1,080	291.99	98.75	0.27	4	13.7	3.7	-13.7	-3.7	-	-
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	146	20.96	52.45	0.14	0	0	0				
Apixaban	146	20.96	52.45	0.14	0	0	0	0	0	-	-
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	146	41.44	103.68	0.28	0	0	0				
Apixaban	146	47.35	118.46	0.32	0	0	0	0	0	-	-

¹Conditional analysis includes informative events and person-time.

Table 37. Effect Estimates for Risk of Major Extracranial Bleeding among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
HAS-BLED Score: 0											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	4,882	1,119.62	83.77	0.23	8	7.15	1.64	4.25	0.87	2.78 (1.06, 7.24)	0.037
Apixaban	11,721	3,110.11	96.92	0.27	9	2.89	0.77				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	4,649	537.99	42.27	0.12	5	9.29	1.08	5.58	0.65	2.50 (0.49, 12.89)	0.273
Apixaban	4,649	537.99	42.27	0.12	2	3.72	0.43				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	4,649	1,071.55	84.19	0.23	7	6.53	1.51	4.03	0.86	2.61 (0.67, 10.10)	0.165
Apixaban	4,649	1,199.34	94.23	0.26	3	2.5	0.65				
HAS-BLED Score: 1											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	9,587	2,586.85	98.55	0.27	14	5.41	1.46	2.68	0.57	1.90 (0.97, 3.72)	0.06
Apixaban	25,870	8,404.36	118.66	0.32	23	2.74	0.89				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	9,076	1,208.45	48.63	0.13	9	7.45	0.99	4.97	0.66	3.00 (0.81, 11.08)	0.099
Apixaban	9,076	1,208.45	48.63	0.13	3	2.48	0.33				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	9,076	2,450.67	98.62	0.27	13	5.3	1.43	2.92	0.66	2.13 (0.85, 5.34)	0.108
Apixaban	9,076	2,930.07	117.92	0.32	7	2.39	0.77				
HAS-BLED Score: 2											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	4,194	1,109.67	96.64	0.26	7	6.31	1.67	-1.75	-0.91	0.74 (0.33, 1.65)	0.456
Apixaban	15,911	5,090.82	116.86	0.32	41	8.05	2.58				

Table 37. Effect Estimates for Risk of Major Extracranial Bleeding among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	3,904	530.91	49.67	0.14	7	13.18	1.79	7.53	1.02	2.33 (0.60, 9.02)	0.22
Apixaban	3,904	530.91	49.67	0.14	3	5.65	0.77				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	3,904	1,044.10	97.68	0.27	7	6.7	1.79	-2.7	-1.28	0.65 (0.26, 1.66)	0.373
Apixaban	3,904	1,275.66	119.35	0.33	12	9.41	3.07				
HAS-BLED Score: 3											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	967	250.34	94.56	0.26	4	15.98	4.14	2.88	0.44	1.16 (0.39, 3.45)	0.785
Apixaban	5,143	1,451.11	103.06	0.28	19	13.09	3.69				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	877	109.87	45.76	0.13	2	18.2	2.28	9.1	1.14	2.00 (0.18, 22.06)	0.571
Apixaban	877	109.87	45.76	0.13	1	9.1	1.14				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	877	230.8	96.12	0.26	3	13	3.42	5.18	1.14	1.85 (0.30, 11.35)	0.508
Apixaban	877	255.94	106.59	0.29	2	7.81	2.28				
HAS-BLED Score: 4+											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	164	31.53	70.23	0.19	1	31.72	6.1	13.21	1.42	1.84 (0.22, 15.66)	0.575
Apixaban	1,284	324.21	92.23	0.25	6	18.51	4.67				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	135	13.86	37.5	0.1	0	0	0	0	0	-	-
Apixaban	135	13.86	37.5	0.1	0	0	0				

Table 37. Effect Estimates for Risk of Major Extracranial Bleeding among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	135	25.92	70.12	0.19	1	38.58	7.41	3.26	0	1.42 (0.09, 22.75)	0.804
Apixaban	135	28.31	76.6	0.21	1	35.32	7.41				

¹Conditional analysis includes informative events and person-time.

Table 38. Effect Estimates for Risk of Gastrointestinal Bleeding among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	46,957	14,705.44	114.38	0.31	126	8.57	2.68	2.66	1.16	1.52 (1.02, 2.27)	0.038
Dabigatran	19,735	5,079.71	94.01	0.26	30	5.91	1.52				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	19,478	2,512.43	47.11	0.13	23	9.15	1.18	1.99	0.26	1.28 (0.69, 2.37)	0.436
Dabigatran	19,478	2,512.43	47.11	0.13	18	7.16	0.92				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	19,478	6,102.81	114.44	0.31	41	6.72	2.1	0.73	0.56	1.18 (0.74, 1.89)	0.49
Dabigatran	19,478	5,010.43	93.96	0.26	30	5.99	1.54				

¹Conditional analysis includes informative events and person-time.

Table 39. Effect Estimates for Risk of Gastrointestinal Bleeding among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Antiplatelets

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
No Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	42,557	13,211.18	113.39	0.31	97	7.34	2.28	2.41	1.01	1.55 (0.98, 2.44)	0.06
Dabigatran	18,180	4,659.12	93.61	0.26	23	4.94	1.27				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	17,874	2,302.68	47.05	0.13	20	8.69	1.12	3.04	0.39	1.54 (0.77, 3.09)	0.227
Dabigatran	17,874	2,302.68	47.05	0.13	13	5.65	0.73				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	17,874	5,547.49	113.36	0.31	34	6.13	1.9	1.11	0.62	1.27 (0.74, 2.15)	0.384
Dabigatran	17,874	4,581.04	93.61	0.26	23	5.02	1.29				
Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	4,400	1,494.26	124.04	0.34	29	19.41	6.59	2.76	2.09	1.29 (0.56, 2.95)	0.548
Dabigatran	1,555	420.59	98.79	0.27	7	16.64	4.5				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	1,452	206.35	51.91	0.14	4	19.38	2.75	-14.54	-2.07	0.57 (0.17, 1.95)	0.372
Dabigatran	1,452	206.35	51.91	0.14	7	33.92	4.82				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	1,452	508.68	127.96	0.35	7	13.76	4.82	-4.01	0	0.90 (0.31, 2.58)	0.844
Dabigatran	1,452	393.84	99.07	0.27	7	17.77	4.82				

¹Conditional analysis includes informative events and person-time.

Table 40. Effect Estimates for Risk of Gastrointestinal Bleeding among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Sex

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Male											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	35,054	10,705.82	111.55	0.31	83	7.75	2.37	2.26	0.98	1.51 (0.93, 2.44)	0.094
Dabigatran	15,155	3,821.44	92.1	0.25	21	5.5	1.39				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	14,863	1,903.58	46.78	0.13	19	9.98	1.28	2.1	0.27	1.27 (0.64, 2.49)	0.494
Dabigatran	14,863	1,903.58	46.78	0.13	15	7.88	1.01				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	14,863	4,585.12	112.68	0.31	29	6.32	1.95	0.71	0.54	1.22 (0.69, 2.14)	0.491
Dabigatran	14,863	3,743.03	91.98	0.25	21	5.61	1.41				
Female											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	11,903	3,999.62	122.73	0.34	43	10.75	3.61	3.6	1.65	1.53 (0.74, 3.14)	0.249
Dabigatran	4,580	1,258.27	100.35	0.27	9	7.15	1.97				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	4,452	596.16	48.91	0.13	5	8.39	1.12	0	0	1.00 (0.29, 3.45)	1
Dabigatran	4,452	596.16	48.91	0.13	5	8.39	1.12				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	4,452	1,471.37	120.71	0.33	12	8.16	2.7	0.83	0.67	1.11 (0.47, 2.64)	0.811
Dabigatran	4,452	1,229.01	100.83	0.28	9	7.32	2.02				

¹Conditional analysis includes informative events and person-time.

Table 41. Effect Estimates for Risk of Gastrointestinal Bleeding among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Age Group

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Age Group: 21-49 years											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	7,914	1,857.25	85.72	0.23	6	3.23	0.76	-2.94	-0.42	0.50 (0.14, 1.78)	0.283
Dabigatran	3,406	648.15	69.51	0.19	4	6.17	1.17				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	3,235	347.98	39.29	0.11	1	2.87	0.31	-2.87	-0.31	0.50 (0.05, 5.51)	0.571
Dabigatran	3,235	347.98	39.29	0.11	2	5.75	0.62				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	3,235	764.48	86.31	0.24	2	2.62	0.62	-3.9	-0.62	0.42 (0.08, 2.33)	0.324
Dabigatran	3,235	614.2	69.35	0.19	4	6.51	1.24				
Age Group: 50-64 years											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	39,043	12,848.19	120.2	0.33	120	9.34	3.07	3.47	1.48	1.70 (1.11, 2.60)	0.015
Dabigatran	16,329	4,431.56	99.13	0.27	26	5.87	1.59				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	16,050	2,155.28	49.05	0.13	21	9.74	1.31	2.32	0.31	1.31 (0.68, 2.52)	0.413
Dabigatran	16,050	2,155.28	49.05	0.13	16	7.42	1				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	16,050	5,292.25	120.44	0.33	39	7.37	2.43	1.39	0.81	1.31 (0.79, 2.15)	0.293
Dabigatran	16,050	4,347.33	98.93	0.27	26	5.98	1.62				

¹Conditional analysis includes informative events and person-time.

Table 42. Effect Estimates for Risk of Gastrointestinal Bleeding among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
CHA₂DS₂VaSc Score: 0											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	8,747	2,145.82	89.6	0.25	7	3.26	0.8	-4.86	-0.94	0.40 (0.14, 1.13)	0.084
Dabigatran	4,031	862.06	78.11	0.21	7	8.12	1.74				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	3,901	443.68	41.54	0.11	0	0	0	-11.27	-1.28	-	-
Dabigatran	3,901	443.68	41.54	0.11	5	11.27	1.28				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	3,901	954.68	89.39	0.24	1	1.05	0.26	-7.36	-1.54	0.12 (0.01, 0.98)	0.048
Dabigatran	3,901	832.88	77.98	0.21	7	8.4	1.79				
CHA₂DS₂VaSc Score: 1											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	16,216	5,002.89	112.69	0.31	36	7.2	2.22	4.88	1.64	3.26 (1.16, 9.18)	0.025
Dabigatran	6,940	1,728.85	90.99	0.25	4	2.31	0.58				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	6,713	854.5	46.49	0.13	9	10.53	1.34	7.02	0.89	3.00 (0.81, 11.08)	0.099
Dabigatran	6,713	854.5	46.49	0.13	3	3.51	0.45				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	6,713	2,079.71	113.16	0.31	16	7.69	2.38	5.31	1.79	3.48 (1.16, 10.41)	0.026
Dabigatran	6,713	1,679.01	91.35	0.25	4	2.38	0.6				
CHA₂DS₂VaSc Score: 2											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	9,535	3,314.78	126.98	0.35	29	8.75	3.04	3.26	1.5	1.68 (0.70, 4.06)	0.248
Dabigatran	3,902	1,092.18	102.23	0.28	6	5.49	1.54				

Table 42. Effect Estimates for Risk of Gastrointestinal Bleeding among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	3,706	509.88	50.25	0.14	5	9.81	1.35	0	0	1.00 (0.29, 3.45)	1
Dabigatran	3,706	509.88	50.25	0.14	5	9.81	1.35				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	3,706	1,297.62	127.89	0.35	10	7.71	2.7	1.9	1.08	1.37 (0.50, 3.77)	0.546
Dabigatran	3,706	1,033.68	101.88	0.28	6	5.8	1.62				
CHA₂DS₂VaSc Score: 3											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	6,311	2,283.32	132.15	0.36	17	7.45	2.69	6.21	2.33	6.68 (0.89, 50.27)	0.065
Dabigatran	2,766	810.68	107.05	0.29	1	1.23	0.36				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	2,678	391.27	53.37	0.15	1	2.56	0.37	0	0	1.00 (0.06, 15.99)	1
Dabigatran	2,678	391.27	53.37	0.15	1	2.56	0.37				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	2,678	981.78	133.9	0.37	4	4.07	1.49	2.81	1.12	3.51 (0.39, 31.50)	0.262
Dabigatran	2,678	789.37	107.66	0.29	1	1.27	0.37				
CHA₂DS₂VaSc Score: 4											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	4,065	1,349.98	121.3	0.33	22	16.3	5.41	-8.27	-1.47	0.67 (0.31, 1.42)	0.292
Dabigatran	1,454	407.01	102.24	0.28	10	24.57	6.88				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	1,375	189.02	50.21	0.14	5	26.45	3.64	0	0	1.00 (0.29, 3.45)	1
Dabigatran	1,375	189.02	50.21	0.14	5	26.45	3.64				

Table 42. Effect Estimates for Risk of Gastrointestinal Bleeding among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	1,375	458.51	121.8	0.33	6	13.09	4.36	-10.11	-2.18	0.61 (0.22, 1.72)	0.353
Dabigatran	1,375	388.02	103.07	0.28	9	23.19	6.55				
CHA₂DS₂VaSc Score: 5											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	1,618	486.57	109.84	0.3	10	20.55	6.18	5.53	1.99	1.46 (0.32, 6.69)	0.625
Dabigatran	477	133.18	101.98	0.28	2	15.02	4.19				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	424	57.55	49.58	0.14	2	34.75	4.72	17.38	2.36	2.00 (0.18, 22.06)	0.571
Dabigatran	424	57.55	49.58	0.14	1	17.38	2.36				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	424	133.24	114.78	0.31	2	15.01	4.72	-1.98	0	0.82 (0.12, 5.84)	0.845
Dabigatran	424	117.7	101.39	0.28	2	16.99	4.72				
CHA₂DS₂VaSc Score: 6+											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	465	122.08	95.89	0.26	5	40.96	10.75	40.96	10.75	-	-
Dabigatran	165	45.74	101.24	0.28	0	0	0				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	142	16.92	43.53	0.12	0	0	0	0	0	-	-
Dabigatran	142	16.92	43.53	0.12	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	142	34.69	89.23	0.24	1	28.83	7.04	28.83	7.04	-	-
Dabigatran	142	37.95	97.63	0.27	0	0	0				

¹Conditional analysis includes informative events and person-time.

Table 43. Effect Estimates for Risk of Gastrointestinal Bleeding among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
HAS-BLED Score: 0											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	10,799	2,869.67	97.06	0.27	13	4.53	1.2	-1.75	-0.23	0.72 (0.29, 1.82)	0.492
Dabigatran	4,867	1,115.44	83.71	0.23	7	6.28	1.44				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	4,727	555.28	42.91	0.12	0	0	0	-7.2	-0.85	-	-
Dabigatran	4,727	555.28	42.91	0.12	4	7.2	0.85				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	4,727	1,228.28	94.91	0.26	2	1.63	0.42	-4.82	-1.06	0.26 (0.05, 1.28)	0.099
Dabigatran	4,727	1,085.45	83.87	0.23	7	6.45	1.48				
HAS-BLED Score: 1											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	21,938	7,256.82	120.82	0.33	42	5.79	1.91	1.14	0.66	1.29 (0.68, 2.46)	0.438
Dabigatran	9,562	2,582.38	98.64	0.27	12	4.65	1.25				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	9,259	1,231.98	48.6	0.13	9	7.31	0.97	2.44	0.32	1.50 (0.53, 4.21)	0.442
Dabigatran	9,259	1,231.98	48.6	0.13	6	4.87	0.65				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	9,259	3,080.67	121.53	0.33	14	4.54	1.51	-0.25	0.22	0.98 (0.45, 2.13)	0.967
Dabigatran	9,259	2,500.84	98.65	0.27	12	4.8	1.3				
HAS-BLED Score: 2											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	10,990	3,649.98	121.31	0.33	52	14.25	4.73	7.9	3.06	2.47 (1.12, 5.45)	0.025
Dabigatran	4,182	1,102.11	96.26	0.26	7	6.35	1.67				

Table 43. Effect Estimates for Risk of Gastrointestinal Bleeding among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	4,006	531.82	48.49	0.13	9	16.92	2.25	5.64	0.75	1.50 (0.53, 4.21)	0.442
Dabigatran	4,006	531.82	48.49	0.13	6	11.28	1.5				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	4,006	1,339.57	122.14	0.33	18	13.44	4.49	6.75	2.75	2.22 (0.93, 5.34)	0.073
Dabigatran	4,006	1,046.69	95.43	0.26	7	6.69	1.75				
HAS-BLED Score: 3											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	2,724	807.35	108.25	0.3	13	16.1	4.77	4.1	1.66	1.40 (0.40, 4.93)	0.599
Dabigatran	964	249.93	94.7	0.26	3	12	3.11				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	884	116.42	48.1	0.13	4	34.36	4.52	17.18	2.26	2.00 (0.37, 10.92)	0.423
Dabigatran	884	116.42	48.1	0.13	2	17.18	2.26				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	884	277.2	114.53	0.31	5	18.04	5.66	5.1	2.26	1.62 (0.39, 6.79)	0.511
Dabigatran	884	231.82	95.78	0.26	3	12.94	3.39				
HAS-BLED Score: 4+											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	506	121.62	87.79	0.24	6	49.33	11.86	15.83	5.61	1.73 (0.21, 14.53)	0.614
Dabigatran	160	29.85	68.14	0.19	1	33.5	6.25				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	126	13.14	38.1	0.1	0	0	0	-76.1	-7.94	-	-
Dabigatran	126	13.14	38.1	0.1	1	76.1	7.94				

Table 43. Effect Estimates for Risk of Gastrointestinal Bleeding among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	126	27.23	78.93	0.22	0	0	0	-40.21	-7.94	-	-
Dabigatran	126	24.87	72.1	0.2	1	40.21	7.94				

¹Conditional analysis includes informative events and person-time.

Table 44. Effect Estimates for Risk of Gastrointestinal Bleeding among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	47,405	14,822.65	114.21	0.31	128	8.64	2.7	4.16	1.33	1.98 (1.50, 2.61)	<0.001
Apixaban	59,652	18,323.76	112.2	0.31	82	4.48	1.37				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	45,490	6,412.05	51.48	0.14	73	11.38	1.6	6.39	0.9	2.28 (1.51, 3.46)	<0.001
Apixaban	45,490	6,412.05	51.48	0.14	32	4.99	0.7				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	45,490	14,293.86	114.77	0.31	121	8.47	2.66	4.33	1.38	2.07 (1.51, 2.83)	<0.001
Apixaban	45,490	14,013.14	112.51	0.31	58	4.14	1.28				

¹Conditional analysis includes informative events and person-time.

Table 45. Effect Estimates for Risk of Gastrointestinal Bleeding among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Antiplatelets

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
No Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	42,998	13,324.65	113.19	0.31	98	7.35	2.28	3.48	1.1	1.92 (1.40, 2.64)	<0.001
Apixaban	52,362	15,983.64	111.49	0.31	62	3.88	1.18				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	40,966	5,741.25	51.19	0.14	50	8.71	1.22	3.83	0.54	1.79 (1.12, 2.84)	0.014
Apixaban	40,966	5,741.25	51.19	0.14	28	4.88	0.68				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	40,966	12,772.52	113.88	0.31	90	7.05	2.2	3.29	1.05	1.89 (1.33, 2.69)	<0.001
Apixaban	40,966	12,515.94	111.59	0.31	47	3.76	1.15				
Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	4,407	1,498.00	124.15	0.34	30	20.03	6.81	11.48	4.06	2.51 (1.42, 4.42)	0.001
Apixaban	7,290	2,340.13	117.25	0.32	20	8.55	2.74				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	4,220	666.64	57.7	0.16	23	34.5	5.45	27	4.27	4.60 (1.75, 12.10)	0.002
Apixaban	4,220	666.64	57.7	0.16	5	7.5	1.18				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	4,220	1,433.73	124.09	0.34	30	20.92	7.11	13.11	4.5	2.74 (1.37, 5.47)	0.004
Apixaban	4,220	1,407.00	121.78	0.33	11	7.82	2.61				

¹Conditional analysis includes informative events and person-time.

Table 46. Effect Estimates for Risk of Gastrointestinal Bleeding among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Sex

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Male											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	35,418	10,809.59	111.47	0.31	85	7.86	2.4	3.4	1.07	1.80 (1.29, 2.53)	<0.001
Apixaban	42,211	12,534.61	108.46	0.3	56	4.47	1.33				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	33,516	4,661.15	50.8	0.14	46	9.87	1.37	5.58	0.78	2.30 (1.36, 3.89)	0.002
Apixaban	33,516	4,661.15	50.8	0.14	20	4.29	0.6				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	33,516	10,278.93	112.02	0.31	80	7.78	2.39	3.37	1.07	1.79 (1.24, 2.59)	0.002
Apixaban	33,516	9,981.14	108.77	0.3	44	4.41	1.31				
Female											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	11,987	4,013.06	122.28	0.33	43	10.72	3.59	6.22	2.1	2.45 (1.50, 4.00)	<0.001
Apixaban	17,441	5,789.15	121.24	0.33	26	4.49	1.49				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	11,719	1,747.43	54.46	0.15	24	13.73	2.05	9.16	1.37	3.00 (1.35, 6.68)	0.007
Apixaban	11,719	1,747.43	54.46	0.15	8	4.58	0.68				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	11,719	3,933.26	122.59	0.34	41	10.42	3.5	6.88	2.3	2.95 (1.60, 5.41)	<0.001
Apixaban	11,719	3,950.75	123.13	0.34	14	3.54	1.19				

¹Conditional analysis includes informative events and person-time.

Table 47. Effect Estimates for Risk of Gastrointestinal Bleeding among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Age Group

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Age Group: 21-49 years											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	7,982	1,871.33	85.63	0.23	6	3.21	0.75	2.25	0.53	3.85 (0.78, 19.09)	0.099
Apixaban	8,905	2,095.07	85.93	0.24	2	0.95	0.22				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	7,219	824.65	41.72	0.11	2	2.43	0.28	2.43	0.28	-	-
Apixaban	7,219	824.65	41.72	0.11	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	7,219	1,707.68	86.4	0.24	5	2.93	0.69	2.33	0.55	5.20 (0.61, 44.49)	0.133
Apixaban	7,219	1,681.92	85.1	0.23	1	0.59	0.14				
Age Group: 50-64 years											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	39,423	12,951.33	119.99	0.33	122	9.42	3.09	4.49	1.52	1.96 (1.48, 2.60)	<0.001
Apixaban	50,747	16,228.69	116.81	0.32	80	4.93	1.58				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	37,839	5,542.52	53.5	0.15	69	12.45	1.82	7.4	1.08	2.46 (1.59, 3.82)	<0.001
Apixaban	37,839	5,542.52	53.5	0.15	28	5.05	0.74				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	37,839	12,454.42	120.22	0.33	115	9.23	3.04	4.57	1.53	2.00 (1.45, 2.75)	<0.001
Apixaban	37,839	12,221.01	117.97	0.32	57	4.66	1.51				

¹Conditional analysis includes informative events and person-time.

Table 48. Effect Estimates for Risk of Gastrointestinal Bleeding among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
CHA₂DS₂VaSc Score: 0											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	8,885	2,181.34	89.67	0.25	7	3.21	0.79	0.38	0.11	1.10 (0.37, 3.28)	0.869
Apixaban	8,870	2,120.39	87.31	0.24	6	2.83	0.68				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	8,144	953.42	42.76	0.12	2	2.1	0.25	1.05	0.12	2.00 (0.18, 22.06)	0.571
Apixaban	8,144	953.42	42.76	0.12	1	1.05	0.12				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	8,144	2,003.07	89.84	0.25	6	3	0.74	-0.1	0	0.95 (0.30, 2.95)	0.926
Apixaban	8,144	1,940.16	87.01	0.24	6	3.09	0.74				
CHA₂DS₂VaSc Score: 1											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	16,403	5,049.17	112.43	0.31	37	7.33	2.26	4.66	1.45	2.76 (1.51, 5.03)	<0.001
Apixaban	18,714	5,631.50	109.91	0.3	15	2.66	0.8				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	15,545	2,185.02	51.34	0.14	19	8.7	1.22	6.41	0.9	3.80 (1.42, 10.18)	0.008
Apixaban	15,545	2,185.02	51.34	0.14	5	2.29	0.32				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	15,545	4,834.98	113.6	0.31	35	7.24	2.25	4.9	1.54	3.14 (1.59, 6.18)	<0.001
Apixaban	15,545	4,698.24	110.39	0.3	11	2.34	0.71				
CHA₂DS₂VaSc Score: 2											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	9,599	3,327.22	126.6	0.35	29	8.72	3.02	2.79	1.04	1.51 (0.89, 2.57)	0.125
Apixaban	13,121	4,389.92	122.2	0.33	26	5.92	1.98				

Table 48. Effect Estimates for Risk of Gastrointestinal Bleeding among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	9,198	1,403.61	55.74	0.15	18	12.82	1.96	6.41	0.98	2.00 (0.90, 4.45)	0.09
Apixaban	9,198	1,403.61	55.74	0.15	9	6.41	0.98				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	9,198	3,190.49	126.69	0.35	28	8.78	3.04	3.66	1.3	1.74 (0.94, 3.21)	0.078
Apixaban	9,198	3,126.85	124.17	0.34	16	5.12	1.74				
CHA₂DS₂VaSc Score: 3											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	6,345	2,295.18	132.12	0.36	17	7.41	2.68	2.84	1.12	1.68 (0.81, 3.47)	0.16
Apixaban	8,343	2,847.59	124.67	0.34	13	4.57	1.56				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	5,860	928.84	57.89	0.16	9	9.69	1.54	1.08	0.17	1.12 (0.43, 2.92)	0.808
Apixaban	5,860	928.84	57.89	0.16	8	8.61	1.37				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	5,860	2,133.72	132.99	0.36	14	6.56	2.39	1.16	0.51	1.24 (0.56, 2.74)	0.591
Apixaban	5,860	2,037.89	127.02	0.35	11	5.4	1.88				
CHA₂DS₂VaSc Score: 4											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	4,092	1,357.19	121.14	0.33	23	16.95	5.62	13.17	4.36	4.42 (1.97, 9.91)	<0.001
Apixaban	6,369	2,117.74	121.45	0.33	8	3.78	1.26				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	3,956	606.81	56.03	0.15	13	21.42	3.29	16.48	2.53	4.33 (1.23, 15.21)	0.022
Apixaban	3,956	606.81	56.03	0.15	3	4.94	0.76				

Table 48. Effect Estimates for Risk of Gastrointestinal Bleeding among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	3,956	1,314.21	121.34	0.33	22	16.74	5.56	11.61	3.79	3.14 (1.34, 7.35)	0.009
Apixaban	3,956	1,365.61	126.08	0.35	7	5.13	1.77				
CHA₂DS₂VaSc Score: 5											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	1,617	488.93	110.44	0.3	10	20.45	6.18	10.71	3.34	2.14 (0.87, 5.29)	0.098
Apixaban	3,159	924.17	106.85	0.29	9	9.74	2.85				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	1,552	216.67	50.99	0.14	5	23.08	3.22	4.62	0.64	1.25 (0.34, 4.65)	0.739
Apixaban	1,552	216.67	50.99	0.14	4	18.46	2.58				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	1,552	474.03	111.56	0.31	10	21.1	6.44	10.74	3.22	1.96 (0.67, 5.75)	0.218
Apixaban	1,552	482.89	113.64	0.31	5	10.35	3.22				
CHA₂DS₂VaSc Score: 6+											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	464	123.62	97.31	0.27	5	40.45	10.78	23.35	6.13	2.30 (0.67, 7.95)	0.188
Apixaban	1,076	292.45	99.27	0.27	5	17.1	4.65				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	405	55.44	50	0.14	3	54.11	7.41	54.11	7.41	-	-
Apixaban	405	55.44	50	0.14	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	405	111.35	100.42	0.27	5	44.9	12.35	36.36	9.88	4.85 (0.56, 41.73)	0.151
Apixaban	405	117.04	105.55	0.29	1	8.54	2.47				

¹Conditional analysis includes informative events and person-time.

Table 49. Effect Estimates for Risk of Gastrointestinal Bleeding among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
HAS-BLED Score: 0											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	10,942	2,901.44	96.85	0.27	13	4.48	1.19	1.9	0.5	1.72 (0.71, 4.15)	0.229
Apixaban	11,666	3,103.36	97.16	0.27	8	2.58	0.69				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	10,183	1,269.64	45.54	0.12	5	3.94	0.49	3.94	0.49	-	-
Apixaban	10,183	1,269.64	45.54	0.12	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	10,183	2,721.36	97.61	0.27	12	4.41	1.18	1.79	0.49	1.70 (0.67, 4.31)	0.267
Apixaban	10,183	2,673.74	95.9	0.26	7	2.62	0.69				
HAS-BLED Score: 1											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	22,157	7,307.11	120.45	0.33	42	5.75	1.9	3.84	1.27	3.03 (1.70, 5.39)	<0.001
Apixaban	25,766	8,381.53	118.81	0.33	16	1.91	0.62				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	20,948	3,085.16	53.79	0.15	17	5.51	0.81	2.59	0.38	1.89 (0.84, 4.24)	0.123
Apixaban	20,948	3,085.16	53.79	0.15	9	2.92	0.43				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	20,948	6,955.76	121.28	0.33	39	5.61	1.86	3.56	1.19	2.74 (1.49, 5.05)	0.001
Apixaban	20,948	6,830.51	119.1	0.33	14	2.05	0.67				
HAS-BLED Score: 2											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	11,065	3,677.66	121.4	0.33	54	14.68	4.88	7.78	2.67	2.16 (1.41, 3.31)	<0.001
Apixaban	15,842	5,068.58	116.86	0.32	35	6.91	2.21				

Table 49. Effect Estimates for Risk of Gastrointestinal Bleeding among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	10,630	1,570.49	53.96	0.15	29	18.47	2.73	9.55	1.41	2.07 (1.09, 3.92)	0.025
Apixaban	10,630	1,570.49	53.96	0.15	14	8.91	1.32				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	10,630	3,529.41	121.27	0.33	51	14.45	4.8	7.17	2.45	2.01 (1.25, 3.24)	0.004
Apixaban	10,630	3,433.44	117.97	0.32	25	7.28	2.35				
HAS-BLED Score: 3											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	2,738	815.07	108.73	0.3	13	15.95	4.75	3.52	1.22	1.33 (0.65, 2.72)	0.435
Apixaban	5,102	1,447.80	103.65	0.28	18	12.43	3.53				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	2,647	360.03	49.68	0.14	10	27.78	3.78	11.11	1.51	1.67 (0.61, 4.59)	0.323
Apixaban	2,647	360.03	49.68	0.14	6	16.67	2.27				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	2,647	788.07	108.74	0.3	13	16.5	4.91	3.83	1.13	1.29 (0.56, 2.94)	0.547
Apixaban	2,647	789.43	108.93	0.3	10	12.67	3.78				
HAS-BLED Score: 4+											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	503	121.39	88.14	0.24	6	49.43	11.93	33.92	8.01	3.18 (0.97, 10.42)	0.057
Apixaban	1,276	322.5	92.31	0.25	5	15.5	3.92				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	466	52.24	40.94	0.11	4	76.57	8.58	57.43	6.44	4.00 (0.45, 35.79)	0.215
Apixaban	466	52.24	40.94	0.11	1	19.14	2.15				

Table 49. Effect Estimates for Risk of Gastrointestinal Bleeding among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	466	112.79	88.41	0.24	5	44.33	10.73	27.55	6.44	2.52 (0.49, 12.99)	0.27
Apixaban	466	119.16	93.4	0.26	2	16.78	4.29				

¹Conditional analysis includes informative events and person-time.

Table 50. Effect Estimates for Risk of Gastrointestinal Bleeding among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Unmatched Analysis (Site-adjusted only)											
Dabigatran	19,794	5,098.02	94.07	0.26	30	5.88	1.52	1.37	0.13	1.31 (0.86, 1.99)	0.212
Apixaban	59,929	18,380.61	112.02	0.31	83	4.52	1.38				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	19,168	2,465.18	46.97	0.13	20	8.11	1.04	4.06	0.52	2.00 (0.94, 4.27)	0.074
Apixaban	19,168	2,465.18	46.97	0.13	10	4.06	0.52				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	19,168	4,950.75	94.34	0.26	30	6.06	1.57	2.46	0.47	1.62 (0.93, 2.84)	0.09
Apixaban	19,168	5,826.51	111.03	0.3	21	3.6	1.1				

¹Conditional analysis includes informative events and person-time.

Table 51. Effect Estimates for Risk of Gastrointestinal Bleeding among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Antiplatelets

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
No Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	18,235	4,674.70	93.63	0.26	23	4.92	1.26	0.99	0.06	1.24 (0.76, 2.00)	0.389
Apixaban	52,576	16,023.68	111.32	0.3	63	3.93	1.2				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	17,571	2,253.49	46.84	0.13	12	5.33	0.68				
Apixaban	17,571	2,253.49	46.84	0.13	6	2.66	0.34	2.66	0.34	2.00 (0.75, 5.33)	0.166
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	17,571	4,513.30	93.82	0.26	23	5.1	1.31				
Apixaban	17,571	5,333.79	110.87	0.3	14	2.62	0.8	2.47	0.51	1.92 (0.98, 3.73)	0.056
Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	1,559	423.32	99.18	0.27	7	16.54	4.49				
Apixaban	7,353	2,356.93	117.08	0.32	20	8.49	2.72	8.05	1.77	2.01 (0.85, 4.78)	0.112
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	1,442	191.63	48.54	0.13	4	20.87	2.77				
Apixaban	1,442	191.63	48.54	0.13	3	15.66	2.08	5.22	0.69	1.33 (0.30, 5.96)	0.706
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	1,442	397.81	100.76	0.28	6	15.08	4.16				
Apixaban	1,442	451.85	114.45	0.31	6	13.28	4.16	1.8	0	1.07 (0.34, 3.31)	0.912

¹Conditional analysis includes informative events and person-time.

Table 52. Effect Estimates for Risk of Gastrointestinal Bleeding among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Sex

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Male											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	15,194	3,833.48	92.15	0.25	21	5.48	1.38	0.94	0.04	1.22 (0.74, 2.02)	0.437
Apixaban	42,415	12,561.40	108.17	0.3	57	4.54	1.34				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	14,474	1,835.56	46.32	0.13	14	7.63	0.97	3.81	0.48	2.00 (0.81, 4.96)	0.134
Apixaban	14,474	1,835.56	46.32	0.13	7	3.81	0.48				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	14,474	3,660.76	92.38	0.25	20	5.46	1.38	2.18	0.41	1.59 (0.80, 3.15)	0.185
Apixaban	14,474	4,257.91	107.45	0.29	14	3.29	0.97				
Female											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	4,600	1,264.54	100.41	0.27	9	7.12	1.96	2.65	0.47	1.58 (0.74, 3.38)	0.241
Apixaban	17,514	5,819.21	121.36	0.33	26	4.47	1.48				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	4,402	596.66	49.51	0.14	6	10.06	1.36	5.03	0.68	2.00 (0.50, 8.00)	0.327
Apixaban	4,402	596.66	49.51	0.14	3	5.03	0.68				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	4,402	1,222.55	101.44	0.28	9	7.36	2.04	2.59	0.45	1.51 (0.56, 4.05)	0.418
Apixaban	4,402	1,466.13	121.65	0.33	7	4.77	1.59				

¹Conditional analysis includes informative events and person-time.

Table 53. Effect Estimates for Risk of Gastrointestinal Bleeding among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Age Group

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Age Group: 21-49 years											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	3,410	648.42	69.45	0.19	4	6.17	1.17	5.22	0.95	7.72 (1.39, 42.78)	0.019
Apixaban	8,938	2,099.95	85.81	0.23	2	0.95	0.22				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	3,182	332.61	38.18	0.1	3	9.02	0.94	9.02	0.94	-	-
Apixaban	3,182	332.61	38.18	0.1	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	3,182	607.27	69.71	0.19	4	6.59	1.26	6.59	1.26	-	-
Apixaban	3,182	717.29	82.34	0.23	0	0	0				
Age Group: 50-64 years											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	16,384	4,449.59	99.2	0.27	26	5.84	1.59	0.87	0	1.17 (0.75, 1.82)	0.498
Apixaban	50,991	16,280.66	116.62	0.32	81	4.98	1.59				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	15,742	2,102.79	48.79	0.13	17	8.08	1.08	3.8	0.51	1.89 (0.84, 4.24)	0.123
Apixaban	15,742	2,102.79	48.79	0.13	9	4.28	0.57				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	15,742	4,283.81	99.39	0.27	26	6.07	1.65	1.92	0.32	1.40 (0.79, 2.49)	0.254
Apixaban	15,742	5,056.18	117.31	0.32	21	4.15	1.33				

¹Conditional analysis includes informative events and person-time.

Table 54. Effect Estimates for Risk of Gastrointestinal Bleeding among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
CHA₂DS₂VaSc Score: 0											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	4,041	864.37	78.13	0.21	7	8.1	1.73	5.27	1.06	3.27 (1.09, 9.81)	0.034
Apixaban	8,912	2,121.62	86.95	0.24	6	2.83	0.67				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	3,804	422.37	40.56	0.11	5	11.84	1.31	9.47	1.05	5.00 (0.58, 42.80)	0.142
Apixaban	3,804	422.37	40.56	0.11	1	2.37	0.26				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	3,804	815.75	78.33	0.21	7	8.58	1.84	6.38	1.31	3.98 (0.82, 19.17)	0.085
Apixaban	3,804	910.1	87.39	0.24	2	2.2	0.53				
CHA₂DS₂VaSc Score: 1											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	6,960	1,735.05	91.05	0.25	4	2.31	0.57	-0.35	-0.22	0.90 (0.30, 2.74)	0.855
Apixaban	18,799	5,644.10	109.66	0.3	15	2.66	0.8				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	6,625	848.38	46.77	0.13	2	2.36	0.3	1.18	0.15	2.00 (0.18, 22.06)	0.571
Apixaban	6,625	848.38	46.77	0.13	1	1.18	0.15				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	6,625	1,666.11	91.86	0.25	4	2.4	0.6	0.88	0.15	1.62 (0.36, 7.24)	0.53
Apixaban	6,625	1,969.67	108.59	0.3	3	1.52	0.45				
CHA₂DS₂VaSc Score: 2											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	3,914	1,098.46	102.51	0.28	6	5.46	1.53	-0.43	-0.44	0.90 (0.37, 2.19)	0.81
Apixaban	13,191	4,414.61	122.24	0.33	26	5.89	1.97				

Table 54. Effect Estimates for Risk of Gastrointestinal Bleeding among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	3,671	492.02	48.95	0.13	4	8.13	1.09	-2.03	-0.27	0.80 (0.21, 2.98)	0.739
Apixaban	3,671	492.02	48.95	0.13	5	10.16	1.36				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	3,671	1,021.15	101.6	0.28	6	5.88	1.63	0.16	-0.27	0.99 (0.33, 2.97)	0.992
Apixaban	3,671	1,223.85	121.77	0.33	7	5.72	1.91				
CHA₂DS₂VaSc Score: 3											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	2,774	813.22	107.08	0.29	1	1.23	0.36	-3.67	-1.31	0.24 (0.03, 1.84)	0.17
Apixaban	8,379	2,858.53	124.61	0.34	14	4.9	1.67				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	2,477	351	51.76	0.14	0	0	0	0	0	-	-
Apixaban	2,477	351	51.76	0.14	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	2,477	741.14	109.29	0.3	1	1.35	0.4	-2.22	-0.81	0.37 (0.04, 3.61)	0.395
Apixaban	2,477	840.55	123.95	0.34	3	3.57	1.21				
CHA₂DS₂VaSc Score: 4											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	1,459	407.05	101.9	0.28	10	24.57	6.85	20.8	5.6	6.60 (2.58, 16.90)	<0.001
Apixaban	6,381	2,121.45	121.43	0.33	8	3.77	1.25				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	1,360	204.1	54.82	0.15	8	39.2	5.88	24.5	3.68	2.67 (0.71, 10.05)	0.147
Apixaban	1,360	204.1	54.82	0.15	3	14.7	2.21				

Table 54. Effect Estimates for Risk of Gastrointestinal Bleeding among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	1,360	380.14	102.09	0.28	10	26.31	7.35	20.44	5.15	3.80 (1.04, 13.86)	0.043
Apixaban	1,360	511.09	137.26	0.38	3	5.87	2.21				
CHA₂DS₂VaSc Score: 5											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	479	134.29	102.4	0.28	2	14.89	4.18	5.2	1.35	1.55 (0.33, 7.25)	0.578
Apixaban	3,187	928.29	106.39	0.29	9	9.7	2.82				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	435	58.81	49.38	0.14	1	17	2.3	-17	-2.3	0.50 (0.05, 5.51)	0.571
Apixaban	435	58.81	49.38	0.14	2	34.01	4.6				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	435	121.8	102.27	0.28	2	16.42	4.6	1.63	0	1.12 (0.16, 8.04)	0.912
Apixaban	435	135.26	113.57	0.31	2	14.79	4.6				
CHA₂DS₂VaSc Score: 6+											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	167	45.58	99.69	0.27	0	0	0	-17.12	-4.63	-	-
Apixaban	1,080	291.99	98.75	0.27	5	17.12	4.63				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	146	20.96	52.45	0.14	0	0	0	-47.71	-6.85	-	-
Apixaban	146	20.96	52.45	0.14	1	47.71	6.85				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	146	41.44	103.68	0.28	0	0	0	-21.12	-6.85	-	-
Apixaban	146	47.35	118.46	0.32	1	21.12	6.85				

¹Conditional analysis includes informative events and person-time.

Table 55. Effect Estimates for Risk of Gastrointestinal Bleeding among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
HAS-BLED Score: 0											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	4,882	1,119.62	83.77	0.23	7	6.25	1.43	3.68	0.75	2.78 (1.00, 7.72)	0.05
Apixaban	11,721	3,110.11	96.92	0.27	8	2.57	0.68				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	4,649	537.99	42.27	0.12	4	7.44	0.86	5.58	0.65	4.00 (0.45, 35.79)	0.215
Apixaban	4,649	537.99	42.27	0.12	1	1.86	0.22				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	4,649	1,071.55	84.19	0.23	6	5.6	1.29	3.93	0.86	3.45 (0.70, 17.13)	0.129
Apixaban	4,649	1,199.34	94.23	0.26	2	1.67	0.43				
HAS-BLED Score: 1											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	9,587	2,586.85	98.55	0.27	12	4.64	1.25	2.62	0.59	2.29 (1.09, 4.82)	0.029
Apixaban	25,870	8,404.36	118.66	0.32	17	2.02	0.66				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	9,076	1,208.45	48.63	0.13	7	5.79	0.77	4.14	0.55	3.50 (0.73, 16.85)	0.118
Apixaban	9,076	1,208.45	48.63	0.13	2	1.66	0.22				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	9,076	2,450.67	98.62	0.27	11	4.49	1.21	2.78	0.66	2.55 (0.89, 7.37)	0.083
Apixaban	9,076	2,930.07	117.92	0.32	5	1.71	0.55				
HAS-BLED Score: 2											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	4,194	1,109.67	96.64	0.26	7	6.31	1.67	-0.57	-0.53	0.88 (0.39, 1.98)	0.749
Apixaban	15,911	5,090.82	116.86	0.32	35	6.88	2.2				

Table 55. Effect Estimates for Risk of Gastrointestinal Bleeding among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	3,904	530.91	49.67	0.14	7	13.18	1.79	7.53	1.02	2.33 (0.60, 9.02)	0.22
Apixaban	3,904	530.91	49.67	0.14	3	5.65	0.77				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	3,904	1,044.10	97.68	0.27	7	6.7	1.79	-1.13	-0.77	0.79 (0.30, 2.07)	0.624
Apixaban	3,904	1,275.66	119.35	0.33	10	7.84	2.56				
HAS-BLED Score: 3											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	967	250.34	94.56	0.26	3	11.98	3.1	-0.42	-0.4	0.90 (0.26, 3.09)	0.871
Apixaban	5,143	1,451.11	103.06	0.28	18	12.4	3.5				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	877	109.87	45.76	0.13	2	18.2	2.28	9.1	1.14	2.00 (0.18, 22.06)	0.571
Apixaban	877	109.87	45.76	0.13	1	9.1	1.14				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	877	230.8	96.12	0.26	2	8.67	2.28	0.85	0	1.21 (0.16, 8.92)	0.85
Apixaban	877	255.94	106.59	0.29	2	7.81	2.28				
HAS-BLED Score: 4+											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	164	31.53	70.23	0.19	1	31.72	6.1	16.29	2.2	2.32 (0.26, 20.48)	0.449
Apixaban	1,284	324.21	92.23	0.25	5	15.42	3.89				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	135	13.86	37.5	0.1	0	0	0	0	0	-	-
Apixaban	135	13.86	37.5	0.1	0	0	0				

Table 55. Effect Estimates for Risk of Gastrointestinal Bleeding among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	135	25.92	70.12	0.19	1	38.58	7.41	3.26	0	1.42 (0.09, 22.75)	0.804
Apixaban	135	28.31	76.6	0.21	1	35.32	7.41				

¹Conditional analysis includes informative events and person-time.

Table 56. Effect Estimates for Risk of Intracranial Hemorrhage among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	46,957	14,705.44	114.38	0.31	19	1.29	0.4	-0.28	0	0.90 (0.39, 2.07)	0.81
Dabigatran	19,735	5,079.71	94.01	0.26	8	1.57	0.41				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	19,478	2,512.43	47.11	0.13	4	1.59	0.21	-0.4	-0.05	0.80 (0.21, 2.98)	0.739
Dabigatran	19,478	2,512.43	47.11	0.13	5	1.99	0.26				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	19,478	6,102.81	114.44	0.31	6	0.98	0.31	-0.61	-0.1	0.66 (0.23, 1.91)	0.445
Dabigatran	19,478	5,010.43	93.96	0.26	8	1.6	0.41				

¹Conditional analysis includes informative events and person-time.

Table 57. Effect Estimates for Risk of Intracranial Hemorrhage among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Antiplatelets

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
No Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	42,557	13,211.18	113.39	0.31	13	0.98	0.31	-0.52	-0.08	0.72 (0.29, 1.81)	0.486
Dabigatran	18,180	4,659.12	93.61	0.26	7	1.5	0.39				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	17,874	2,302.68	47.05	0.13	1	0.43	0.06	-1.3	-0.17	0.25 (0.03, 2.24)	0.215
Dabigatran	17,874	2,302.68	47.05	0.13	4	1.74	0.22				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	17,874	5,547.49	113.36	0.31	3	0.54	0.17	-0.99	-0.22	0.38 (0.10, 1.46)	0.159
Dabigatran	17,874	4,581.04	93.61	0.26	7	1.53	0.39				
Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	4,400	1,494.26	124.04	0.34	6	4.02	1.36	1.64	0.72	2.21 (0.27, 18.46)	0.463
Dabigatran	1,555	420.59	98.79	0.27	1	2.38	0.64				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	1,452	206.35	51.91	0.14	2	9.69	1.38	4.85	0.69	2.00 (0.18, 22.06)	0.571
Dabigatran	1,452	206.35	51.91	0.14	1	4.85	0.69				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	1,452	508.68	127.96	0.35	2	3.93	1.38	1.39	0.69	1.99 (0.18, 21.98)	0.573
Dabigatran	1,452	393.84	99.07	0.27	1	2.54	0.69				

¹Conditional analysis includes informative events and person-time.

Table 58. Effect Estimates for Risk of Intracranial Hemorrhage among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Sex

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Male											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	35,054	10,705.82	111.55	0.31	14	1.31	0.4	-0.52	-0.06	0.80 (0.32, 1.99)	0.629
Dabigatran	15,155	3,821.44	92.1	0.25	7	1.83	0.46				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	14,863	1,903.58	46.78	0.13	2	1.05	0.13	-1.05	-0.13	0.50 (0.09, 2.73)	0.423
Dabigatran	14,863	1,903.58	46.78	0.13	4	2.1	0.27				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	14,863	4,585.12	112.68	0.31	3	0.65	0.2	-1.22	-0.27	0.33 (0.08, 1.33)	0.118
Dabigatran	14,863	3,743.03	91.98	0.25	7	1.87	0.47				
Female											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	11,903	3,999.62	122.73	0.34	5	1.25	0.42	0.46	0.2	1.55 (0.18, 13.34)	0.688
Dabigatran	4,580	1,258.27	100.35	0.27	1	0.79	0.22				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	4,452	596.16	48.91	0.13	2	3.35	0.45	1.68	0.22	2.00 (0.18, 22.06)	0.571
Dabigatran	4,452	596.16	48.91	0.13	1	1.68	0.22				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	4,452	1,471.37	120.71	0.33	3	2.04	0.67	1.23	0.45	2.74 (0.28, 26.35)	0.384
Dabigatran	4,452	1,229.01	100.83	0.28	1	0.81	0.22				

¹Conditional analysis includes informative events and person-time.

Table 59. Effect Estimates for Risk of Intracranial Hemorrhage among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Age Group

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Age Group: 21-49 years											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	7,914	1,857.25	85.72	0.23	3	1.62	0.38	1.62	0.38	-	-
Dabigatran	3,406	648.15	69.51	0.19	0	0	0				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	3,235	347.98	39.29	0.11	0	0	0	0	0	-	-
Dabigatran	3,235	347.98	39.29	0.11	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	3,235	764.48	86.31	0.24	0	0	0	0	0	-	-
Dabigatran	3,235	614.2	69.35	0.19	0	0	0				
Age Group: 50-64 years											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	39,043	12,848.19	120.2	0.33	16	1.25	0.41	-0.56	-0.08	0.75 (0.32, 1.76)	0.509
Dabigatran	16,329	4,431.56	99.13	0.27	8	1.81	0.49				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	16,050	2,155.28	49.05	0.13	4	1.86	0.25	-0.46	-0.06	0.80 (0.21, 2.98)	0.739
Dabigatran	16,050	2,155.28	49.05	0.13	5	2.32	0.31				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	16,050	5,292.25	120.44	0.33	6	1.13	0.37	-0.71	-0.12	0.65 (0.22, 1.89)	0.429
Dabigatran	16,050	4,347.33	98.93	0.27	8	1.84	0.5				

¹Conditional analysis includes informative events and person-time.

Table 60. Effect Estimates for Risk of Intracranial Hemorrhage among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
CHA₂DS₂VaSc Score: 0											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	8,747	2,145.82	89.6	0.25	1	0.47	0.11	-1.85	-0.38	0.22 (0.02, 2.46)	0.22
Dabigatran	4,031	862.06	78.11	0.21	2	2.32	0.5				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	3,901	443.68	41.54	0.11	0	0	0	-4.51	-0.51	-	-
Dabigatran	3,901	443.68	41.54	0.11	2	4.51	0.51				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	3,901	954.68	89.39	0.24	0	0	0	-2.4	-0.51	-	-
Dabigatran	3,901	832.88	77.98	0.21	2	2.4	0.51				
CHA₂DS₂VaSc Score: 1											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	16,216	5,002.89	112.69	0.31	5	1	0.31	0.42	0.16	2.09 (0.24, 17.94)	0.501
Dabigatran	6,940	1,728.85	90.99	0.25	1	0.58	0.14				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	6,713	854.5	46.49	0.13	1	1.17	0.15	0	0	1.00 (0.06, 15.99)	1
Dabigatran	6,713	854.5	46.49	0.13	1	1.17	0.15				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	6,713	2,079.71	113.16	0.31	1	0.48	0.15	-0.11	0	1.00 (0.06, 16.07)	0.997
Dabigatran	6,713	1,679.01	91.35	0.25	1	0.6	0.15				
CHA₂DS₂VaSc Score: 2											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	9,535	3,314.78	126.98	0.35	5	1.51	0.52	1.51	0.52	-	-
Dabigatran	3,902	1,092.18	102.23	0.28	0	0	0				

Table 60. Effect Estimates for Risk of Intracranial Hemorrhage among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	3,706	509.88	50.25	0.14	0	0	0	0	0	-	-
Dabigatran	3,706	509.88	50.25	0.14	0	0	0	0	0	-	-
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	3,706	1,297.62	127.89	0.35	1	0.77	0.27	0.77	0.27	-	-
Dabigatran	3,706	1,033.68	101.88	0.28	0	0	0	0.77	0.27	-	-
CHA₂DS₂VaSc Score: 3											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	6,311	2,283.32	132.15	0.36	3	1.31	0.48	0.08	0.11	0.84 (0.08, 9.28)	0.888
Dabigatran	2,766	810.68	107.05	0.29	1	1.23	0.36	0.08	0.11	0.84 (0.08, 9.28)	0.888
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	2,678	391.27	53.37	0.15	0	0	0	-2.56	-0.37	-	-
Dabigatran	2,678	391.27	53.37	0.15	1	2.56	0.37	-2.56	-0.37	-	-
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	2,678	981.78	133.9	0.37	1	1.02	0.37	-0.25	0	-	-
Dabigatran	2,678	789.37	107.66	0.29	1	1.27	0.37	-0.25	0	-	-
CHA₂DS₂VaSc Score: 4											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	4,065	1,349.98	121.3	0.33	1	0.74	0.25	-4.17	-1.13	0.18 (0.02, 2.03)	0.166
Dabigatran	1,454	407.01	102.24	0.28	2	4.91	1.38	-4.17	-1.13	0.18 (0.02, 2.03)	0.166
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	1,375	189.02	50.21	0.14	0	0	0	-10.58	-1.45	-	-
Dabigatran	1,375	189.02	50.21	0.14	2	10.58	1.45	-10.58	-1.45	-	-

Table 60. Effect Estimates for Risk of Intracranial Hemorrhage among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	1,375	458.51	121.8	0.33	0	0	0	-5.15	-1.45	-	-
Dabigatran	1,375	388.02	103.07	0.28	2	5.15	1.45				
CHA₂DS₂VaSc Score: 5											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	1,618	486.57	109.84	0.3	1	2.06	0.62	-12.96	-3.57	0.14 (0.01, 1.58)	0.113
Dabigatran	477	133.18	101.98	0.28	2	15.02	4.19				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	424	57.55	49.58	0.14	0	0	0	0	0	-	-
Dabigatran	424	57.55	49.58	0.14	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	424	133.24	114.78	0.31	0	0	0	-16.99	-4.72	-	-
Dabigatran	424	117.7	101.39	0.28	2	16.99	4.72				
CHA₂DS₂VaSc Score: 6+											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	465	122.08	95.89	0.26	3	24.57	6.45	24.57	6.45	-	-
Dabigatran	165	45.74	101.24	0.28	0	0	0				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	142	16.92	43.53	0.12	2	118.2	14.08	118.2	14.08	-	-
Dabigatran	142	16.92	43.53	0.12	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	142	34.69	89.23	0.24	2	57.65	14.08	57.65	14.08	-	-
Dabigatran	142	37.95	97.63	0.27	0	0	0				

¹Conditional analysis includes informative events and person-time.

Table 61. Effect Estimates for Risk of Intracranial Hemorrhage among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
HAS-BLED Score: 0											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	10,799	2,869.67	97.06	0.27	2	0.7	0.19	-1.1	-0.23	0.42 (0.06, 2.99)	0.386
Dabigatran	4,867	1,115.44	83.71	0.23	2	1.79	0.41				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	4,727	555.28	42.91	0.12	0	0	0	-3.6	-0.42	-	-
Dabigatran	4,727	555.28	42.91	0.12	2	3.6	0.42				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	4,727	1,228.28	94.91	0.26	1	0.81	0.21	-1.03	-0.21	0.46 (0.04, 5.05)	0.522
Dabigatran	4,727	1,085.45	83.87	0.23	2	1.84	0.42				
HAS-BLED Score: 1											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	21,938	7,256.82	120.82	0.33	7	0.96	0.32	-0.58	-0.1	0.70 (0.20, 2.40)	0.571
Dabigatran	9,562	2,582.38	98.64	0.27	4	1.55	0.42				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	9,259	1,231.98	48.6	0.13	0	0	0	-2.44	-0.32	-	-
Dabigatran	9,259	1,231.98	48.6	0.13	3	2.44	0.32				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	9,259	3,080.67	121.53	0.33	1	0.32	0.11	-0.87	-0.22	0.29 (0.03, 2.84)	0.29
Dabigatran	9,259	2,500.84	98.65	0.27	3	1.2	0.32				
HAS-BLED Score: 2											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	10,990	3,649.98	121.31	0.33	5	1.37	0.45	0.46	0.22	1.55 (0.18, 13.31)	0.689
Dabigatran	4,182	1,102.11	96.26	0.26	1	0.91	0.24				

Table 61. Effect Estimates for Risk of Intracranial Hemorrhage among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	4,006	531.82	48.49	0.13	1	1.88	0.25	1.88	0.25	-	-
Dabigatran	4,006	531.82	48.49	0.13	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	4,006	1,339.57	122.14	0.33	1	0.75	0.25	-0.21	0	0.87 (0.05, 14.08)	0.925
Dabigatran	4,006	1,046.69	95.43	0.26	1	0.96	0.25				
HAS-BLED Score: 3											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	2,724	807.35	108.25	0.3	4	4.95	1.47	4.95	1.47	-	-
Dabigatran	964	249.93	94.7	0.26	0	0	0				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	884	116.42	48.1	0.13	0	0	0	0	0	-	-
Dabigatran	884	116.42	48.1	0.13	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	884	277.2	114.53	0.31	2	7.22	2.26	7.22	2.26	-	-
Dabigatran	884	231.82	95.78	0.26	0	0	0				
HAS-BLED Score: 4+											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	506	121.62	87.79	0.24	1	8.22	1.98	-25.28	-4.27	0.38 (0.02, 6.08)	0.494
Dabigatran	160	29.85	68.14	0.19	1	33.5	6.25				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	126	13.14	38.1	0.1	1	76.1	7.94	0	0	1.00 (0.06, 15.99)	1
Dabigatran	126	13.14	38.1	0.1	1	76.1	7.94				

Table 61. Effect Estimates for Risk of Intracranial Hemorrhage among Rivaroxaban vs. Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	126	27.23	78.93	0.22	1	36.72	7.94	-3.48	0	0.98 (0.06, 15.71)	0.99
Dabigatran	126	24.87	72.1	0.2	1	40.21	7.94				

¹Conditional analysis includes informative events and person-time.

Table 62. Effect Estimates for Risk of Intracranial Hemorrhage among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	47,405	14,822.65	114.21	0.31	19	1.28	0.4	0.14	0.05	1.11 (0.59, 2.06)	0.753
Apixaban	59,652	18,323.76	112.2	0.31	21	1.15	0.35				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	45,490	6,412.05	51.48	0.14	12	1.87	0.26	1.09	0.15	2.40 (0.85, 6.81)	0.1
Apixaban	45,490	6,412.05	51.48	0.14	5	0.78	0.11				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	45,490	14,293.86	114.77	0.31	19	1.33	0.42	0.33	0.11	1.30 (0.65, 2.61)	0.451
Apixaban	45,490	14,013.14	112.51	0.31	14	1	0.31				

¹Conditional analysis includes informative events and person-time.

Table 63. Effect Estimates for Risk of Intracranial Hemorrhage among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Antiplatelets

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
No Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	42,998	13,324.65	113.19	0.31	13	0.98	0.3	-0.15	-0.04	0.86 (0.42, 1.76)	0.681
Apixaban	52,362	15,983.64	111.49	0.31	18	1.13	0.34				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	40,966	5,741.25	51.19	0.14	8	1.39	0.2	0.52	0.07	1.60 (0.52, 4.89)	0.41
Apixaban	40,966	5,741.25	51.19	0.14	5	0.87	0.12				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	40,966	12,772.52	113.88	0.31	13	1.02	0.32	0.06	0.02	1.05 (0.48, 2.31)	0.9
Apixaban	40,966	12,515.94	111.59	0.31	12	0.96	0.29				
Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	4,407	1,498.00	124.15	0.34	6	4.01	1.36	2.72	0.95	2.93 (0.72, 11.94)	0.134
Apixaban	7,290	2,340.13	117.25	0.32	3	1.28	0.41				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	4,220	666.64	57.7	0.16	4	6	0.95	6	0.95	-	-
Apixaban	4,220	666.64	57.7	0.16	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	4,220	1,433.73	124.09	0.34	5	3.49	1.18	2.07	0.71	2.52 (0.49, 12.99)	0.269
Apixaban	4,220	1,407.00	121.78	0.33	2	1.42	0.47				

¹Conditional analysis includes informative events and person-time.

Table 64. Effect Estimates for Risk of Intracranial Hemorrhage among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Sex

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Male											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	35,418	10,809.59	111.47	0.31	14	1.3	0.4	0.02	0.02	0.97 (0.47, 2.00)	0.934
Apixaban	42,211	12,534.61	108.46	0.3	16	1.28	0.38				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	33,516	4,661.15	50.8	0.14	9	1.93	0.27	1.29	0.18	3.00 (0.81, 11.08)	0.099
Apixaban	33,516	4,661.15	50.8	0.14	3	0.64	0.09				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	33,516	10,278.93	112.02	0.31	14	1.36	0.42	0.26	0.09	1.19 (0.54, 2.63)	0.664
Apixaban	33,516	9,981.14	108.77	0.3	11	1.1	0.33				
Female											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	11,987	4,013.06	122.28	0.33	5	1.25	0.42	0.38	0.13	1.56 (0.45, 5.38)	0.485
Apixaban	17,441	5,789.15	121.24	0.33	5	0.86	0.29				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	11,719	1,747.43	54.46	0.15	4	2.29	0.34	1.72	0.26	4.00 (0.45, 35.79)	0.215
Apixaban	11,719	1,747.43	54.46	0.15	1	0.57	0.09				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	11,719	3,933.26	122.59	0.34	5	1.27	0.43	0.51	0.17	1.75 (0.42, 7.31)	0.446
Apixaban	11,719	3,950.75	123.13	0.34	3	0.76	0.26				

¹Conditional analysis includes informative events and person-time.

Table 65. Effect Estimates for Risk of Intracranial Hemorrhage among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Age Group

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Age Group: 21-49 years											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	7,982	1,871.33	85.63	0.23	3	1.6	0.38	1.13	0.26	3.41 (0.35, 32.91)	0.288
Apixaban	8,905	2,095.07	85.93	0.24	1	0.48	0.11				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	7,219	824.65	41.72	0.11	2	2.43	0.28	2.43	0.28	-	-
Apixaban	7,219	824.65	41.72	0.11	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	7,219	1,707.68	86.4	0.24	3	1.76	0.42	1.16	0.28	3.02 (0.31, 29.05)	0.338
Apixaban	7,219	1,681.92	85.1	0.23	1	0.59	0.14				
Age Group: 50-64 years											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	39,423	12,951.33	119.99	0.33	16	1.24	0.41	0	0.01	0.99 (0.51, 1.91)	0.965
Apixaban	50,747	16,228.69	116.81	0.32	20	1.23	0.39				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	37,839	5,542.52	53.5	0.15	9	1.62	0.24	0.72	0.11	1.80 (0.60, 5.37)	0.292
Apixaban	37,839	5,542.52	53.5	0.15	5	0.9	0.13				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	37,839	12,454.42	120.22	0.33	16	1.28	0.42	0.22	0.08	1.19 (0.57, 2.47)	0.649
Apixaban	37,839	12,221.01	117.97	0.32	13	1.06	0.34				

¹Conditional analysis includes informative events and person-time.

Table 66. Effect Estimates for Risk of Intracranial Hemorrhage among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
CHA₂DS₂VaSc Score: 0											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	8,885	2,181.34	89.67	0.25	1	0.46	0.11	-0.48	-0.11	0.49 (0.04, 5.43)	0.562
Apixaban	8,870	2,120.39	87.31	0.24	2	0.94	0.23				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	8,144	953.42	42.76	0.12	1	1.05	0.12	1.05	0.12	-	-
Apixaban	8,144	953.42	42.76	0.12	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	8,144	2,003.07	89.84	0.25	1	0.5	0.12	-0.53	-0.12	0.49 (0.04, 5.40)	0.559
Apixaban	8,144	1,940.16	87.01	0.24	2	1.03	0.25				
CHA₂DS₂VaSc Score: 1											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	16,403	5,049.17	112.43	0.31	5	0.99	0.3	-0.08	-0.02	0.94 (0.29, 3.11)	0.925
Apixaban	18,714	5,631.50	109.91	0.3	6	1.07	0.32				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	15,545	2,185.02	51.34	0.14	4	1.83	0.26	1.83	0.26	-	-
Apixaban	15,545	2,185.02	51.34	0.14	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	15,545	4,834.98	113.6	0.31	5	1.03	0.32	-0.03	0	0.95 (0.28, 3.29)	0.937
Apixaban	15,545	4,698.24	110.39	0.3	5	1.06	0.32				
CHA₂DS₂VaSc Score: 2											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	9,599	3,327.22	126.6	0.35	5	1.5	0.52	0.36	0.14	1.37 (0.40, 4.74)	0.616
Apixaban	13,121	4,389.92	122.2	0.33	5	1.14	0.38				

Table 66. Effect Estimates for Risk of Intracranial Hemorrhage among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₃VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	9,198	1,403.61	55.74	0.15	2	1.42	0.22	0	0	1.00 (0.14, 7.10)	1
Apixaban	9,198	1,403.61	55.74	0.15	2	1.42	0.22				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	9,198	3,190.49	126.69	0.35	5	1.57	0.54	0.61	0.22	1.67 (0.40, 6.99)	0.482
Apixaban	9,198	3,126.85	124.17	0.34	3	0.96	0.33				
CHA₂DS₃VaSc Score: 3											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	6,345	2,295.18	132.12	0.36	3	1.31	0.47	1.31	0.47	-	-
Apixaban	8,343	2,847.59	124.67	0.34	0	0	0				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	5,860	928.84	57.89	0.16	2	2.15	0.34	2.15	0.34	-	-
Apixaban	5,860	928.84	57.89	0.16	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	5,860	2,133.72	132.99	0.36	3	1.41	0.51	1.41	0.51	-	-
Apixaban	5,860	2,037.89	127.02	0.35	0	0	0				
CHA₂DS₃VaSc Score: 4											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	4,092	1,357.19	121.14	0.33	1	0.74	0.24	-1.15	-0.38	0.38 (0.04, 3.41)	0.386
Apixaban	6,369	2,117.74	121.45	0.33	4	1.89	0.63				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	3,956	606.81	56.03	0.15	0	0	0	-1.65	-0.25	-	-
Apixaban	3,956	606.81	56.03	0.15	1	1.65	0.25				

Table 66. Effect Estimates for Risk of Intracranial Hemorrhage among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	3,956	1,314.21	121.34	0.33	1	0.76	0.25	-1.44	-0.51	0.36 (0.04, 3.46)	0.374
Apixaban	3,956	1,365.61	126.08	0.35	3	2.2	0.76				
CHA₂DS₂VaSc Score: 5											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	1,617	488.93	110.44	0.3	1	2.05	0.62	-0.12	-0.01	0.87 (0.08, 9.73)	0.909
Apixaban	3,159	924.17	106.85	0.29	2	2.16	0.63				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	1,552	216.67	50.99	0.14	1	4.62	0.64	0	0	1.00 (0.06, 15.99)	1
Apixaban	1,552	216.67	50.99	0.14	1	4.62	0.64				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	1,552	474.03	111.56	0.31	1	2.11	0.64	0.04	0	1.02 (0.06, 16.31)	0.989
Apixaban	1,552	482.89	113.64	0.31	1	2.07	0.64				
CHA₂DS₂VaSc Score: 6+											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	464	123.62	97.31	0.27	3	24.27	6.47	17.43	4.61	3.48 (0.58, 20.84)	0.172
Apixaban	1,076	292.45	99.27	0.27	2	6.84	1.86				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	405	55.44	50	0.14	2	36.08	4.94	36.08	4.94	-	-
Apixaban	405	55.44	50	0.14	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	405	111.35	100.42	0.27	2	17.96	4.94	17.96	4.94	-	-
Apixaban	405	117.04	105.55	0.29	0	0	0				

¹Conditional analysis includes informative events and person-time.

Table 67. Effect Estimates for Risk of Intracranial Hemorrhage among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
HAS-BLED Score: 0											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	10,942	2,901.44	96.85	0.27	2	0.69	0.18	0.37	0.1	2.26 (0.20, 25.05)	0.505
Apixaban	11,666	3,103.36	97.16	0.27	1	0.32	0.09				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	10,183	1,269.64	45.54	0.12	2	1.58	0.2	1.58	0.2	-	-
Apixaban	10,183	1,269.64	45.54	0.12	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	10,183	2,721.36	97.61	0.27	2	0.73	0.2	0.36	0.1	2.07 (0.19, 22.88)	0.552
Apixaban	10,183	2,673.74	95.9	0.26	1	0.37	0.1				
HAS-BLED Score: 1											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	22,157	7,307.11	120.45	0.33	7	0.96	0.32	0	0.01	0.96 (0.35, 2.65)	0.935
Apixaban	25,766	8,381.53	118.81	0.33	8	0.95	0.31				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	20,948	3,085.16	53.79	0.15	3	0.97	0.14	0.65	0.1	3.00 (0.31, 28.84)	0.341
Apixaban	20,948	3,085.16	53.79	0.15	1	0.32	0.05				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	20,948	6,955.76	121.28	0.33	7	1.01	0.33	-0.16	-0.05	0.84 (0.31, 2.32)	0.74
Apixaban	20,948	6,830.51	119.1	0.33	8	1.17	0.38				
HAS-BLED Score: 2											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	11,065	3,677.66	121.4	0.33	5	1.36	0.45	0.57	0.2	1.77 (0.48, 6.61)	0.394
Apixaban	15,842	5,068.58	116.86	0.32	4	0.79	0.25				

Table 67. Effect Estimates for Risk of Intracranial Hemorrhage among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	10,630	1,570.49	53.96	0.15	4	2.55	0.38	1.91	0.28	4.00 (0.45, 35.79)	0.215
Apixaban	10,630	1,570.49	53.96	0.15	1	0.64	0.09				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	10,630	3,529.41	121.27	0.33	5	1.42	0.47	0.83	0.28	2.48 (0.48, 12.78)	0.278
Apixaban	10,630	3,433.44	117.97	0.32	2	0.58	0.19				
HAS-BLED Score: 3											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	2,738	815.07	108.73	0.3	4	4.91	1.46	0.07	0.09	1.11 (0.32, 3.83)	0.874
Apixaban	5,102	1,447.80	103.65	0.28	7	4.83	1.37				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	2,647	360.03	49.68	0.14	3	8.33	1.13	5.56	0.76	3.00 (0.31, 28.84)	0.341
Apixaban	2,647	360.03	49.68	0.14	1	2.78	0.38				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	2,647	788.07	108.74	0.3	4	5.08	1.51	1.28	0.38	1.28 (0.28, 5.81)	0.751
Apixaban	2,647	789.43	108.93	0.3	3	3.8	1.13				
HAS-BLED Score: 4+											
Unmatched Analysis (Site-adjusted only)											
Rivaroxaban	503	121.39	88.14	0.24	1	8.24	1.99	5.14	1.2	2.95 (0.18, 47.79)	0.446
Apixaban	1,276	322.5	92.31	0.25	1	3.1	0.78				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Rivaroxaban	466	52.24	40.94	0.11	1	19.14	2.15	19.14	2.15	-	-
Apixaban	466	52.24	40.94	0.11	0	0	0				

Table 67. Effect Estimates for Risk of Intracranial Hemorrhage among Rivaroxaban vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Rivaroxaban	466	112.79	88.41	0.24	1	8.87	2.15	8.87	2.15	-	-
Apixaban	466	119.16	93.4	0.26	0	0	0				

¹Conditional analysis includes informative events and person-time.

Table 68. Effect Estimates for Risk of Intracranial Hemorrhage among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Unmatched Analysis (Site-adjusted only)											
Dabigatran	19,794	5,098.02	94.07	0.26	8	1.57	0.4	0.37	0.04	1.25 (0.55, 2.81)	0.595
Apixaban	59,929	18,380.61	112.02	0.31	22	1.2	0.37				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	19,168	2,465.18	46.97	0.13	7	2.84	0.37	2.43	0.31	7.00 (0.86, 56.89)	0.069
Apixaban	19,168	2,465.18	46.97	0.13	1	0.41	0.05				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	19,168	4,950.75	94.34	0.26	7	1.41	0.37	0.38	0.05	1.39 (0.47, 4.14)	0.556
Apixaban	19,168	5,826.51	111.03	0.3	6	1.03	0.31				

¹Conditional analysis includes informative events and person-time.

Table 69. Effect Estimates for Risk of Intracranial Hemorrhage among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Antiplatelets

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
No Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	18,235	4,674.70	93.63	0.26	7	1.5	0.38	0.31	0.02	1.21 (0.50, 2.88)	0.673
Apixaban	52,576	16,023.68	111.32	0.3	19	1.19	0.36				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	17,571	2,253.49	46.84	0.13	6	2.66	0.34	2.66	0.34	-	-
Apixaban	17,571	2,253.49	46.84	0.13	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	17,571	4,513.30	93.82	0.26	6	1.33	0.34	0.58	0.11	1.77 (0.50, 6.30)	0.375
Apixaban	17,571	5,333.79	110.87	0.3	4	0.75	0.23				
Antiplatelets											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	1,559	423.32	99.18	0.27	1	2.36	0.64	1.09	0.23	1.67 (0.17, 16.26)	0.657
Apixaban	7,353	2,356.93	117.08	0.32	3	1.27	0.41				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	1,442	191.63	48.54	0.13	1	5.22	0.69	5.22	0.69	-	-
Apixaban	1,442	191.63	48.54	0.13	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	1,442	397.81	100.76	0.28	1	2.51	0.69	-1.91	-0.69	0.52 (0.05, 5.70)	0.59
Apixaban	1,442	451.85	114.45	0.31	2	4.43	1.39				

¹Conditional analysis includes informative events and person-time.

Table 70. Effect Estimates for Risk of Intracranial Hemorrhage among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Sex

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Male											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	15,194	3,833.48	92.15	0.25	7	1.83	0.46	0.47	0.06	1.31 (0.54, 3.18)	0.549
Apixaban	42,415	12,561.40	108.17	0.3	17	1.35	0.4				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	14,474	1,835.56	46.32	0.13	7	3.81	0.48	3.27	0.41	7.00 (0.86, 56.89)	0.069
Apixaban	14,474	1,835.56	46.32	0.13	1	0.54	0.07				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	14,474	3,660.76	92.38	0.25	7	1.91	0.48	0.5	0.07	1.37 (0.46, 4.08)	0.572
Apixaban	14,474	4,257.91	107.45	0.29	6	1.41	0.41				
Female											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	4,600	1,264.54	100.41	0.27	1	0.79	0.22	-0.07	-0.07	0.82 (0.10, 7.07)	0.857
Apixaban	17,514	5,819.21	121.36	0.33	5	0.86	0.29				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	4,402	596.66	49.51	0.14	0	0	0	0	0	-	-
Apixaban	4,402	596.66	49.51	0.14	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	4,402	1,222.55	101.44	0.28	0	0	0	0	0	-	-
Apixaban	4,402	1,466.13	121.65	0.33	0	0	0				

¹Conditional analysis includes informative events and person-time.

Table 71. Effect Estimates for Risk of Intracranial Hemorrhage among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and Age Group

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
Age Group: 21-49 years											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	3,410	648.42	69.45	0.19	0	0	0	-0.48	-0.11	-	-
Apixaban	8,938	2,099.95	85.81	0.23	1	0.48	0.11				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	3,182	332.61	38.18	0.1	0	0	0	0	0	-	-
Apixaban	3,182	332.61	38.18	0.1	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	3,182	607.27	69.71	0.19	0	0	0	0	0	-	-
Apixaban	3,182	717.29	82.34	0.23	0	0	0				
Age Group: 50-64 years											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	16,384	4,449.59	99.2	0.27	8	1.8	0.49	0.51	0.08	1.29 (0.57, 2.93)	0.542
Apixaban	50,991	16,280.66	116.62	0.32	21	1.29	0.41				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	15,742	2,102.79	48.79	0.13	7	3.33	0.44	2.85	0.38	7.00 (0.86, 56.89)	0.069
Apixaban	15,742	2,102.79	48.79	0.13	1	0.48	0.06				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	15,742	4,283.81	99.39	0.27	7	1.63	0.44	0.45	0.06	1.38 (0.46, 4.13)	0.56
Apixaban	15,742	5,056.18	117.31	0.32	6	1.19	0.38				

¹Conditional analysis includes informative events and person-time.

Table 72. Effect Estimates for Risk of Intracranial Hemorrhage among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
CHA₂DS₂VaSc Score: 0											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	4,041	864.37	78.13	0.21	2	2.31	0.49	1.37	0.27	2.56 (0.36, 18.37)	0.351
Apixaban	8,912	2,121.62	86.95	0.24	2	0.94	0.22				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	3,804	422.37	40.56	0.11	2	4.74	0.53	4.74	0.53	-	-
Apixaban	3,804	422.37	40.56	0.11	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	3,804	815.75	78.33	0.21	2	2.45	0.53	1.35	0.26	1.84 (0.17, 20.48)	0.62
Apixaban	3,804	910.1	87.39	0.24	1	1.1	0.26				
CHA₂DS₂VaSc Score: 1											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	6,960	1,735.05	91.05	0.25	1	0.58	0.14	-0.49	-0.18	0.51 (0.06, 4.27)	0.535
Apixaban	18,799	5,644.10	109.66	0.3	6	1.06	0.32				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	6,625	848.38	46.77	0.13	1	1.18	0.15	0	0	1.00 (0.06, 15.99)	1
Apixaban	6,625	848.38	46.77	0.13	1	1.18	0.15				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	6,625	1,666.11	91.86	0.25	1	0.6	0.15	-1.94	-0.6	0.24 (0.03, 2.08)	0.197
Apixaban	6,625	1,969.67	108.59	0.3	5	2.54	0.75				
CHA₂DS₂VaSc Score: 2											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	3,914	1,098.46	102.51	0.28	0	0	0	-1.36	-0.45	-	-
Apixaban	13,191	4,414.61	122.24	0.33	6	1.36	0.45				

Table 72. Effect Estimates for Risk of Intracranial Hemorrhage among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	3,671	492.02	48.95	0.13	0	0	0	0	0	-	-
Apixaban	3,671	492.02	48.95	0.13	0	0	0	0	0	-	-
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	3,671	1,021.15	101.6	0.28	0	0	0	0	0	-	-
Apixaban	3,671	1,223.85	121.77	0.33	0	0	0	0	0	-	-
CHA₂DS₂VaSc Score: 3											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	2,774	813.22	107.08	0.29	1	1.23	0.36	1.23	0.36	-	-
Apixaban	8,379	2,858.53	124.61	0.34	0	0	0	0	0	-	-
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	2,477	351	51.76	0.14	1	2.85	0.4	2.85	0.4	-	-
Apixaban	2,477	351	51.76	0.14	0	0	0	0	0	-	-
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	2,477	741.14	109.29	0.3	1	1.35	0.4	1.35	0.4	-	-
Apixaban	2,477	840.55	123.95	0.34	0	0	0	0	0	-	-
CHA₂DS₂VaSc Score: 4											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	1,459	407.05	101.9	0.28	2	4.91	1.37	3.03	0.74	2.05 (0.36, 11.51)	0.416
Apixaban	6,381	2,121.45	121.43	0.33	4	1.89	0.63	0	0	-	-
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	1,360	204.1	54.82	0.15	1	4.9	0.74	4.9	0.74	-	-
Apixaban	1,360	204.1	54.82	0.15	0	0	0	0	0	-	-

Table 72. Effect Estimates for Risk of Intracranial Hemorrhage among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and CHA₂DS₂VaSc Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	1,360	380.14	102.09	0.28	1	2.63	0.74	2.63	0.74	-	-
Apixaban	1,360	511.09	137.26	0.38	0	0	0				
CHA₂DS₂VaSc Score: 5											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	479	134.29	102.4	0.28	2	14.89	4.18	12.74	3.55	6.22 (0.86, 45.08)	0.071
Apixaban	3,187	928.29	106.39	0.29	2	2.15	0.63				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	435	58.81	49.38	0.14	1	17	2.3	17	2.3	-	-
Apixaban	435	58.81	49.38	0.14	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	435	121.8	102.27	0.28	2	16.42	4.6	16.42	4.6	-	-
Apixaban	435	135.26	113.57	0.31	0	0	0				
CHA₂DS₂VaSc Score: 6+											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	167	45.58	99.69	0.27	0	0	0	-6.85	-1.85	-	-
Apixaban	1,080	291.99	98.75	0.27	2	6.85	1.85				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	146	20.96	52.45	0.14	0	0	0	0	0	-	-
Apixaban	146	20.96	52.45	0.14	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	146	41.44	103.68	0.28	0	0	0	0	0	-	-
Apixaban	146	47.35	118.46	0.32	0	0	0				

¹Conditional analysis includes informative events and person-time.

Table 73. Effect Estimates for Risk of Intracranial Hemorrhage among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
HAS-BLED Score: 0											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	4,882	1,119.62	83.77	0.23	2	1.79	0.41	1.14	0.24	2.69 (0.37, 19.36)	0.327
Apixaban	11,721	3,110.11	96.92	0.27	2	0.64	0.17				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	4,649	537.99	42.27	0.12	2	3.72	0.43	3.72	0.43	-	-
Apixaban	4,649	537.99	42.27	0.12	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	4,649	1,071.55	84.19	0.23	2	1.87	0.43	1.87	0.43	-	-
Apixaban	4,649	1,199.34	94.23	0.26	0	0	0				
HAS-BLED Score: 1											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	9,587	2,586.85	98.55	0.27	4	1.55	0.42	0.59	0.11	1.57 (0.47, 5.24)	0.467
Apixaban	25,870	8,404.36	118.66	0.32	8	0.95	0.31				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	9,076	1,208.45	48.63	0.13	2	1.66	0.22	1.66	0.22	-	-
Apixaban	9,076	1,208.45	48.63	0.13	0	0	0				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	9,076	2,450.67	98.62	0.27	3	1.22	0.33	-0.14	-0.11	0.94 (0.21, 4.22)	0.938
Apixaban	9,076	2,930.07	117.92	0.32	4	1.37	0.44				
HAS-BLED Score: 2											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	4,194	1,109.67	96.64	0.26	1	0.9	0.24	0.12	-0.01	1.05 (0.12, 9.52)	0.966
Apixaban	15,911	5,090.82	116.86	0.32	4	0.79	0.25				

Table 73. Effect Estimates for Risk of Intracranial Hemorrhage among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	3,904	530.91	49.67	0.14	0	0	0	-1.88	-0.26	-	-
Apixaban	3,904	530.91	49.67	0.14	1	1.88	0.26				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	3,904	1,044.10	97.68	0.27	1	0.96	0.26	0.17	0	1.35 (0.08, 21.53)	0.833
Apixaban	3,904	1,275.66	119.35	0.33	1	0.78	0.26				
HAS-BLED Score: 3											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	967	250.34	94.56	0.26	0	0	0	-4.82	-1.36	-	-
Apixaban	5,143	1,451.11	103.06	0.28	7	4.82	1.36				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	877	109.87	45.76	0.13	0	0	0	-9.1	-1.14	-	-
Apixaban	877	109.87	45.76	0.13	1	9.1	1.14				
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	877	230.8	96.12	0.26	0	0	0	-3.91	-1.14	-	-
Apixaban	877	255.94	106.59	0.29	1	3.91	1.14				
HAS-BLED Score: 4+											
Unmatched Analysis (Site-adjusted only)											
Dabigatran	164	31.53	70.23	0.19	1	31.72	6.1	28.63	5.32	8.25 (0.51, 134.6)	0.138
Apixaban	1,284	324.21	92.23	0.25	1	3.08	0.78				
1:1 Matched Conditional Analysis; Caliper= 0.05¹											
Dabigatran	135	13.86	37.5	0.1	1	72.15	7.41	72.15	7.41	-	-
Apixaban	135	13.86	37.5	0.1	0	0	0				

Table 73. Effect Estimates for Risk of Intracranial Hemorrhage among Dabigatran vs. Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, by Analysis Type and HAS-BLED Score

Medical Product	Number of New Users	Person Years at Risk	Average Person Days at Risk	Average Person Years at Risk	Number of Events	Incidence Rate per 1,000 Person Years	Risk per 1,000 New Users	Incidence Rate Difference per 1,000 Person Years	Difference in Risk per 1,000 New Users	Hazard Ratio (95% CI)	Wald P-Value
1:1 Matched Unconditional Analysis; Caliper= 0.05											
Dabigatran	135	25.92	70.12	0.19	1	38.58	7.41	38.58	7.41	-	-
Apixaban	135	28.31	76.6	0.21	0	0	0				

¹Conditional analysis includes informative events and person-time.

Figure 1a. Histogram Depicting Propensity Score Distributions of Rivaroxaban and Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, Unmatched Cohort

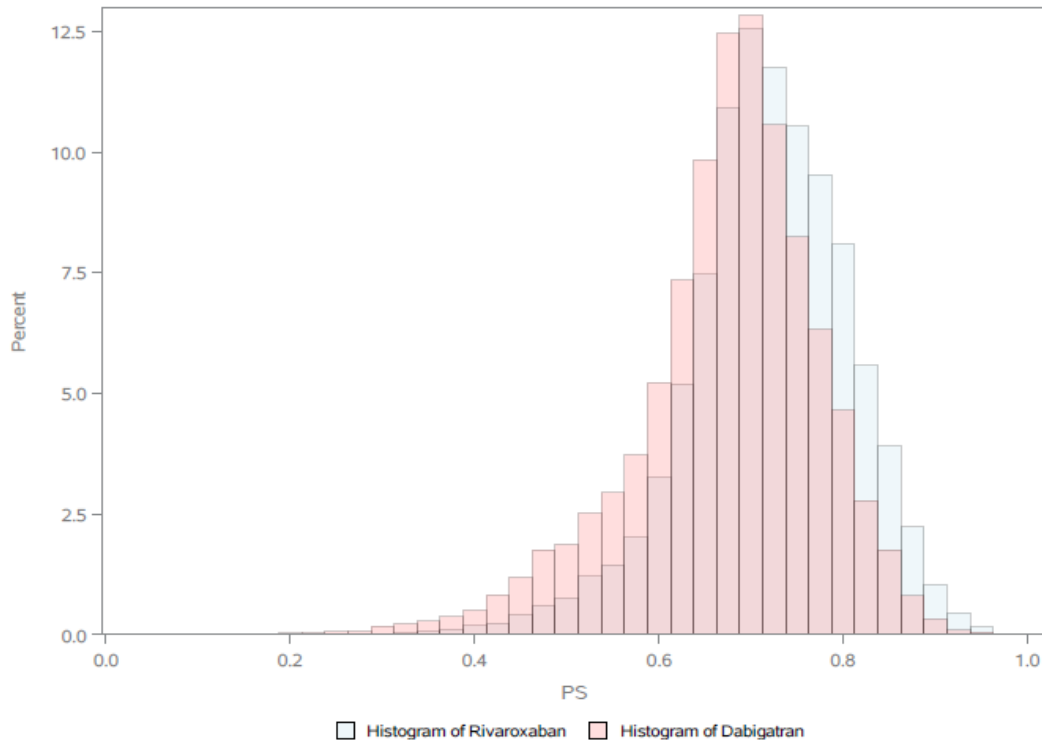


Figure 1b. Histogram Depicting Propensity Score Distributions of Rivaroxaban and Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, Matched Cohort (Caliper = 0.05)

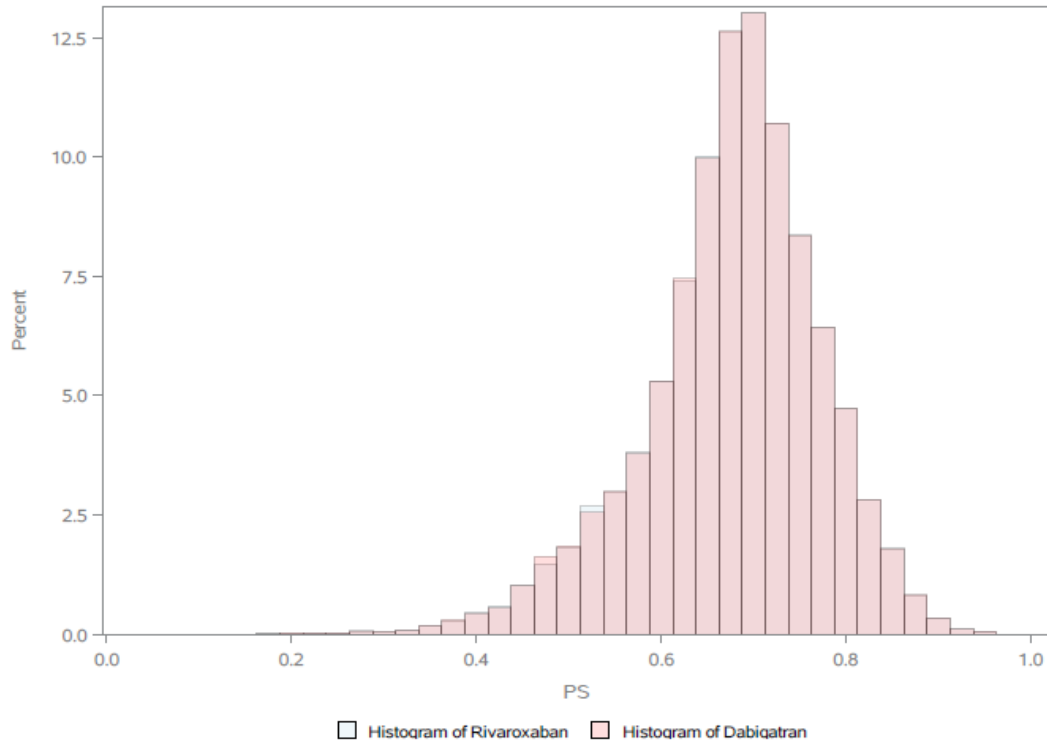


Figure 2a. Histogram Depicting Propensity Score Distributions of Rivaroxaban and Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, Unmatched Cohort

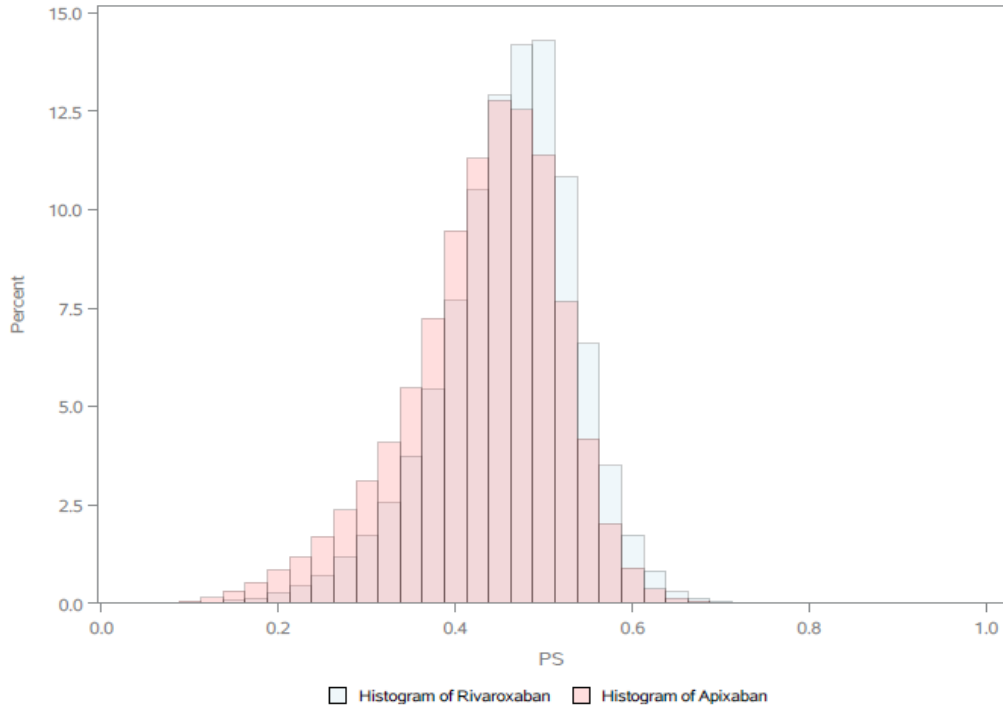


Figure 2b. Histogram Depicting Propensity Score Distributions of Rivaroxaban and Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, Matched Cohort (Caliper = 0.05)

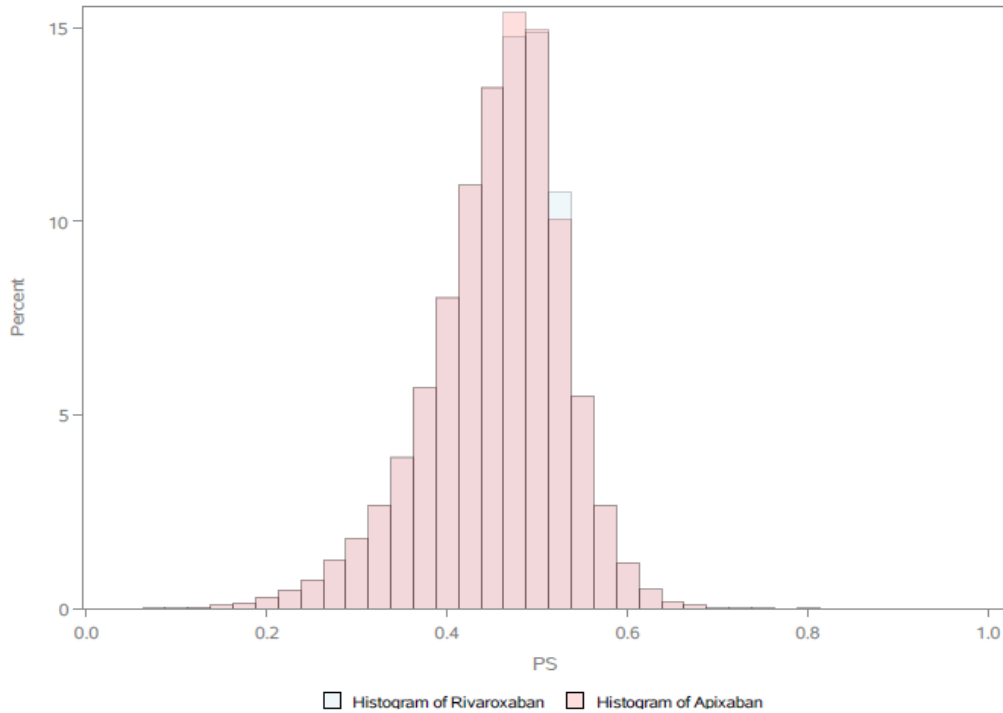


Figure 3a. Histogram Depicting Propensity Score Distributions of Dabigatran and Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, Unmatched Cohort

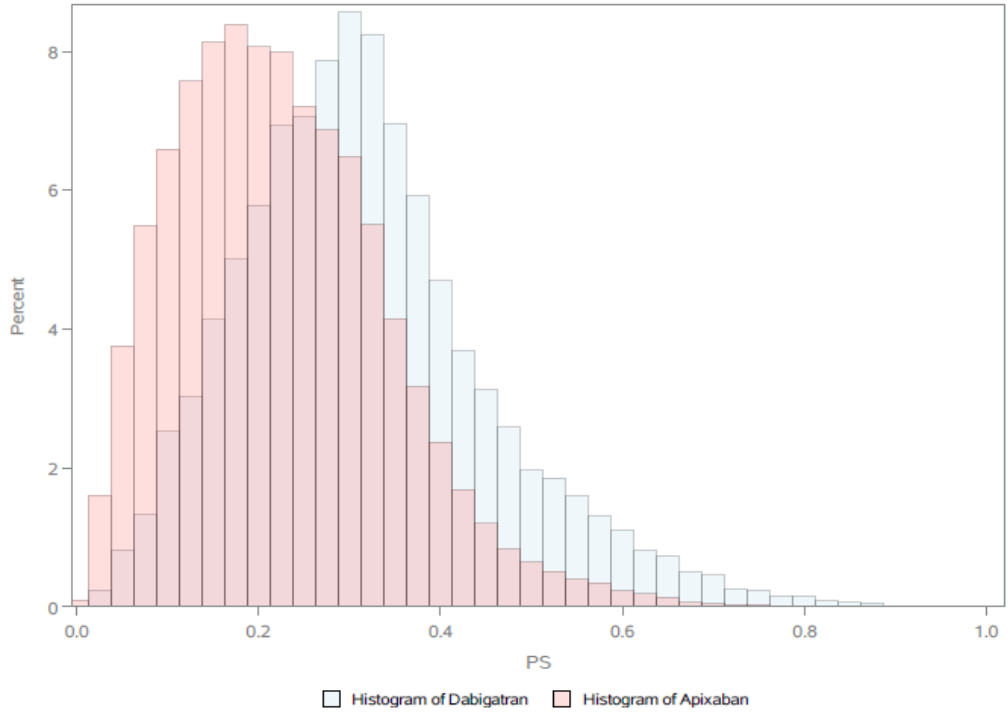


Figure 3b. Histogram Depicting Propensity Score Distributions of Dabigatran and Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, Matched Cohort (Caliper = 0.05)

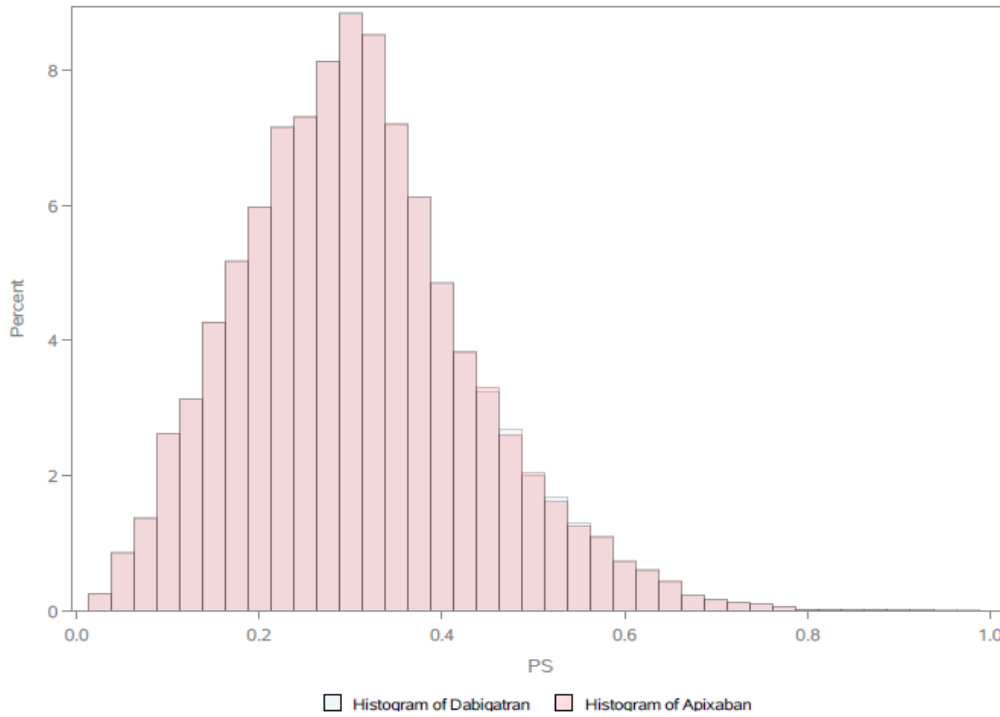


Figure 4a. Kaplan Meier Survival Curves for Risk of Thromboembolic Stroke among Rivaroxaban and Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, Unconditional Matched Cohort

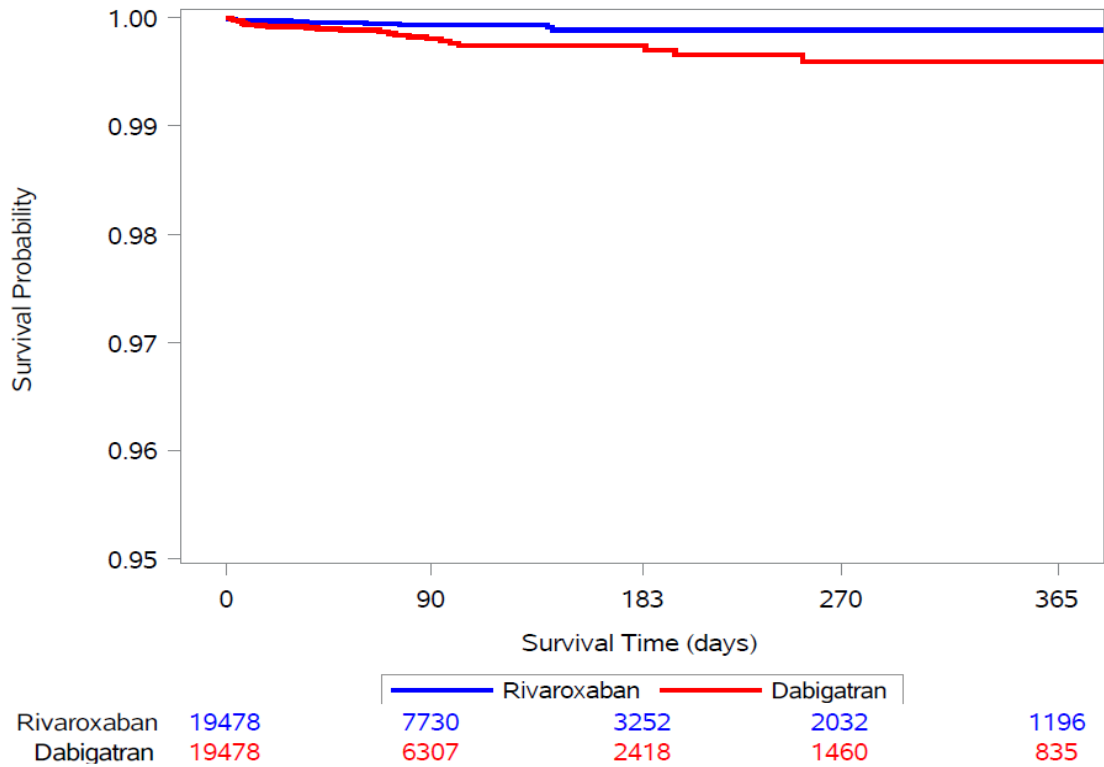


Figure 4b. Kaplan Meier Survival Curves for Risk of Thromboembolic Stroke among Rivaroxaban and Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, Unconditional Matched Cohort

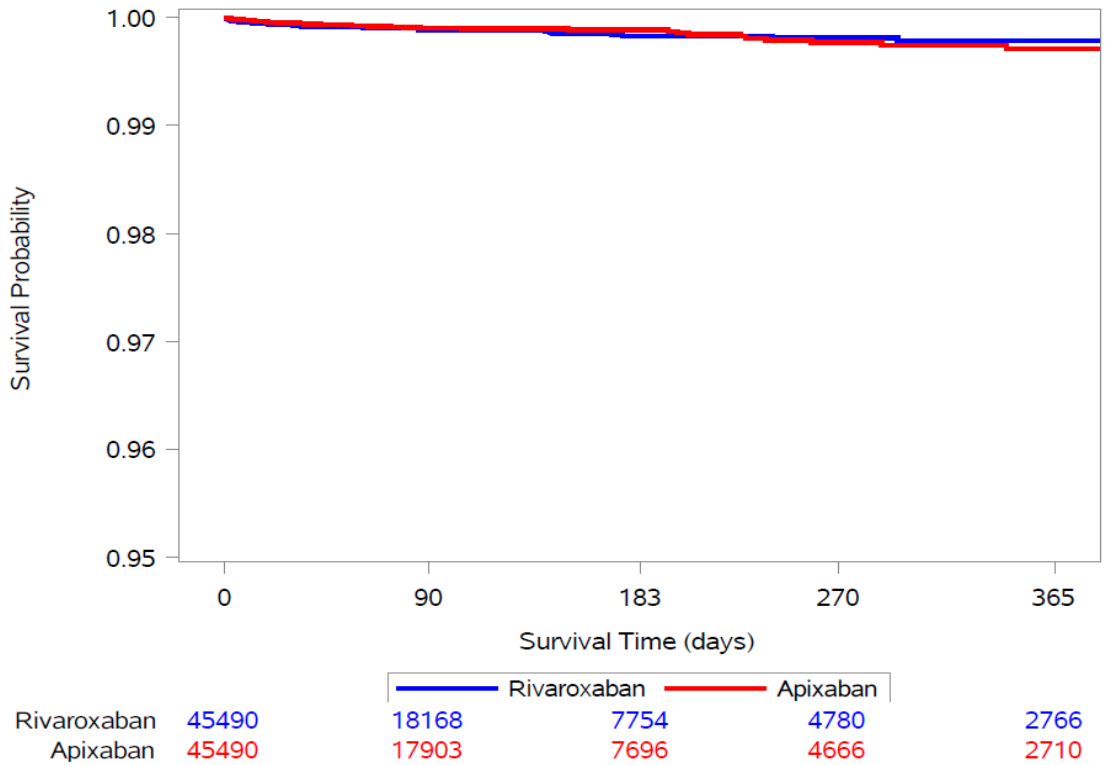


Figure 4c. Kaplan Meier Survival Curves for Risk of Thromboembolic Stroke among Dabigatran and Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, Unconditional Matched Cohort

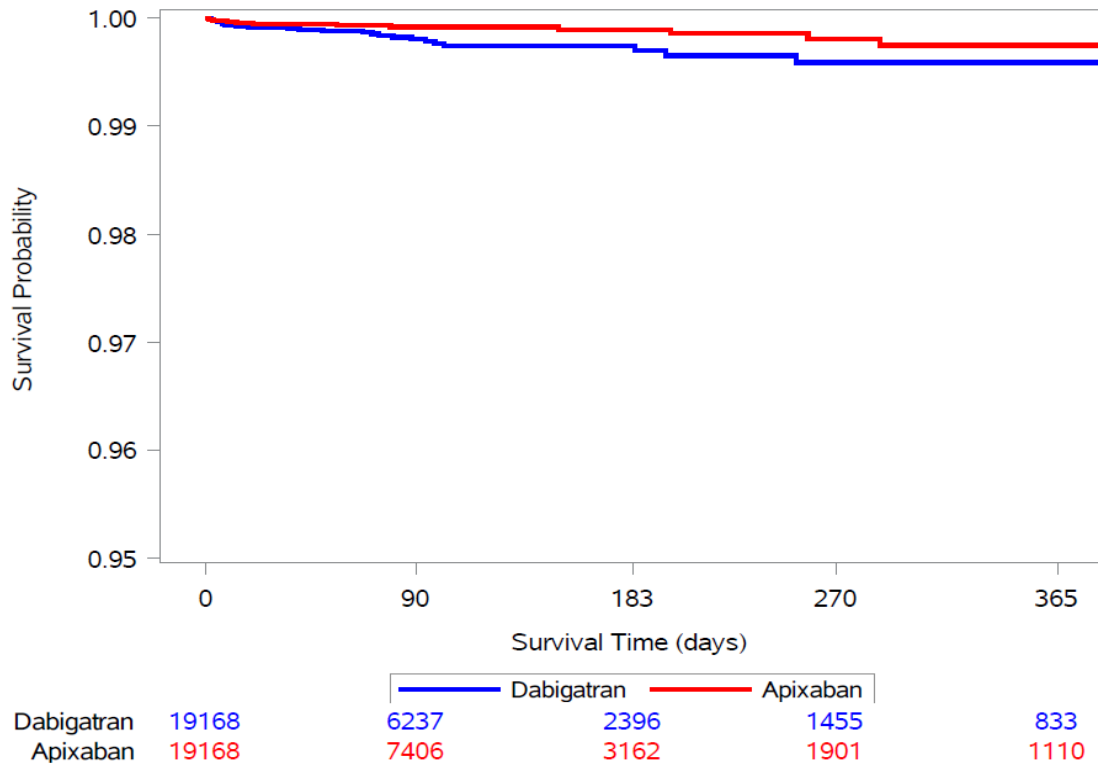


Figure 5a. Kaplan Meier Survival Curves for Risk of Major Extracranial Bleeding Rivaroxaban and Dabigatran among Rivaroxaban and Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, Unconditional Matched Cohort

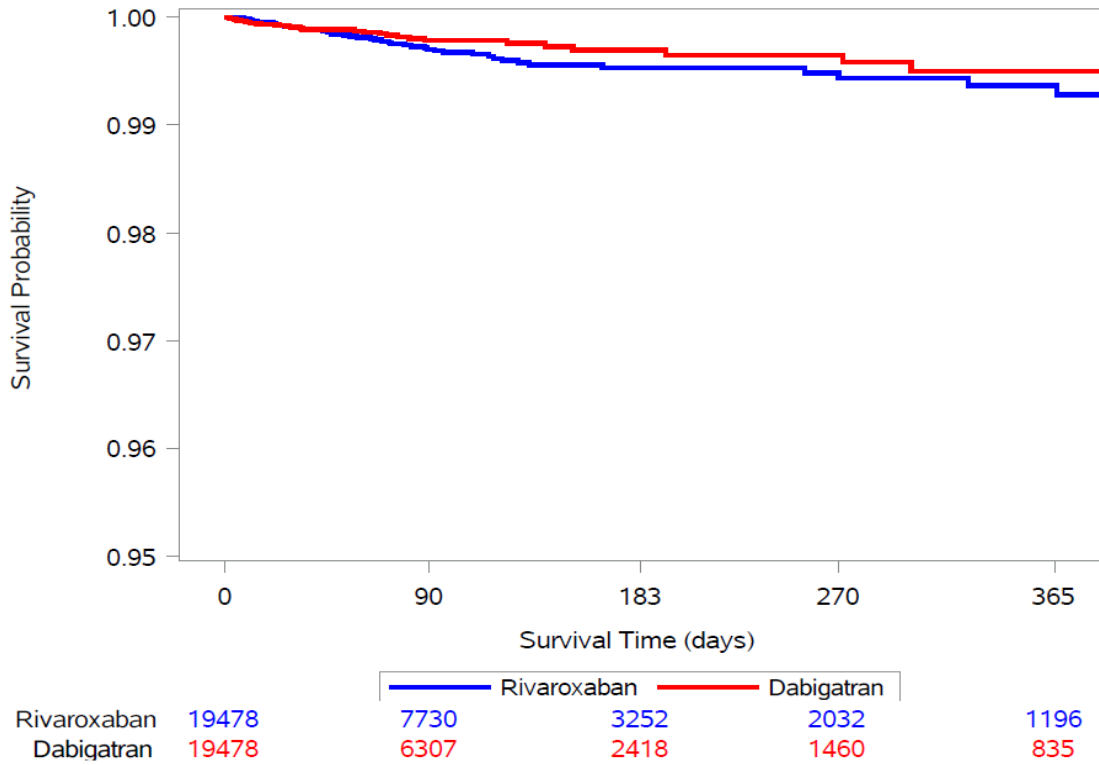
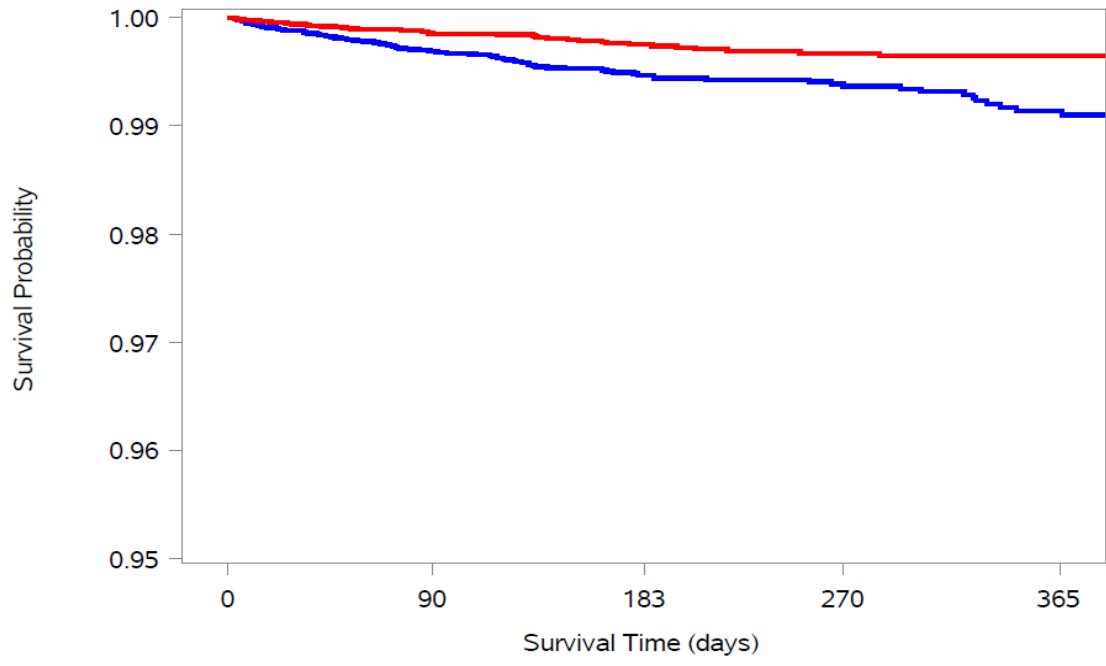


Figure 5b. Kaplan Meier Survival Curves for Risk of Major Extracranial Bleeding Rivaroxaban and Apixaban among Rivaroxaban and Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, Unconditional Matched Cohort



	0	90	183	270	365
Rivaroxaban	45490	18168	7754	4780	2766
Apixaban	45490	17903	7696	4666	2710

Figure 5c. Kaplan Meier Survival Curves for Risk of Major Extracranial Bleeding Dabigatran and Apixaban among Rivaroxaban and Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, Unconditional Matched Cohort

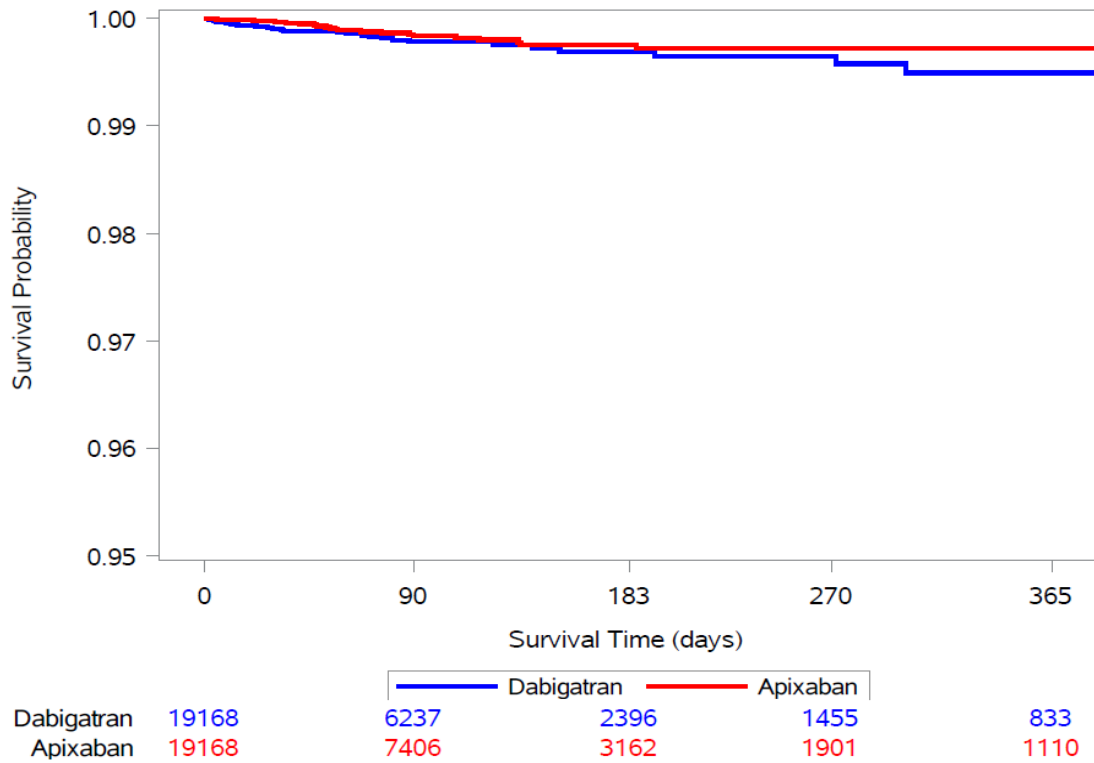


Figure 6a. Kaplan Meier Survival Curves for Risk of Gastrointestinal Bleeding among Rivaroxaban and Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, Unconditional Matched Cohort

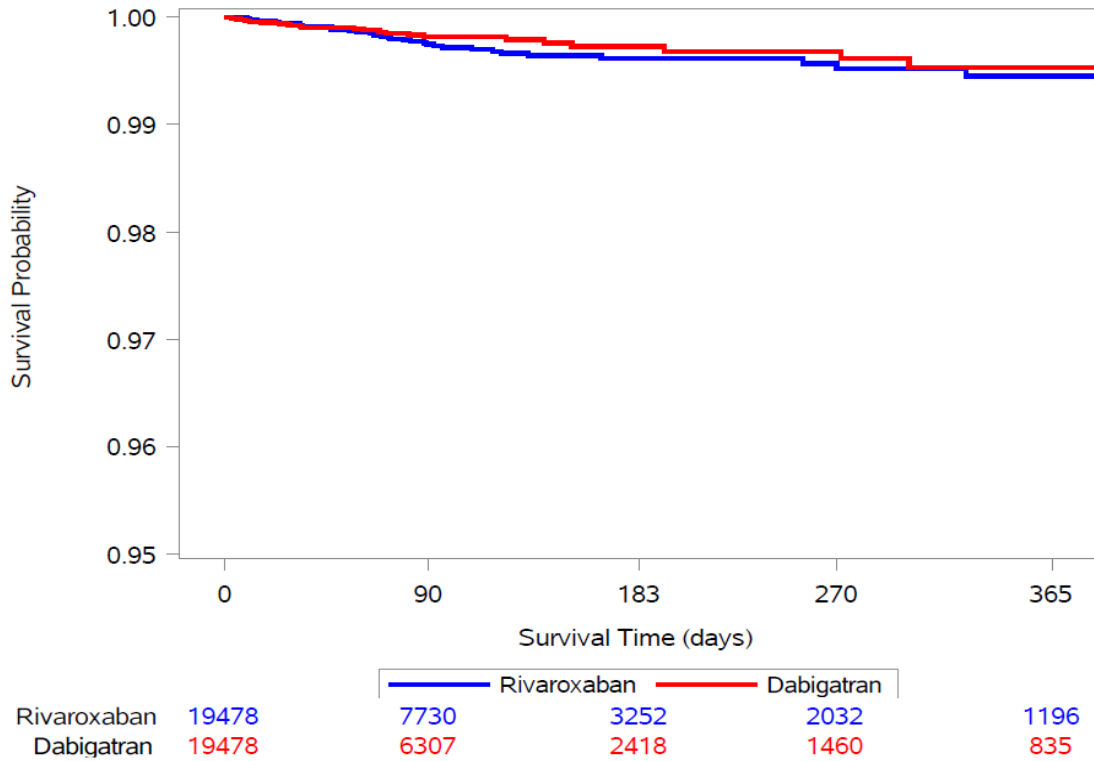


Figure 6b. Kaplan Meier Survival Curves for Risk of Gastrointestinal Bleeding among Rivaroxaban and Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, Unconditional Matched Cohort

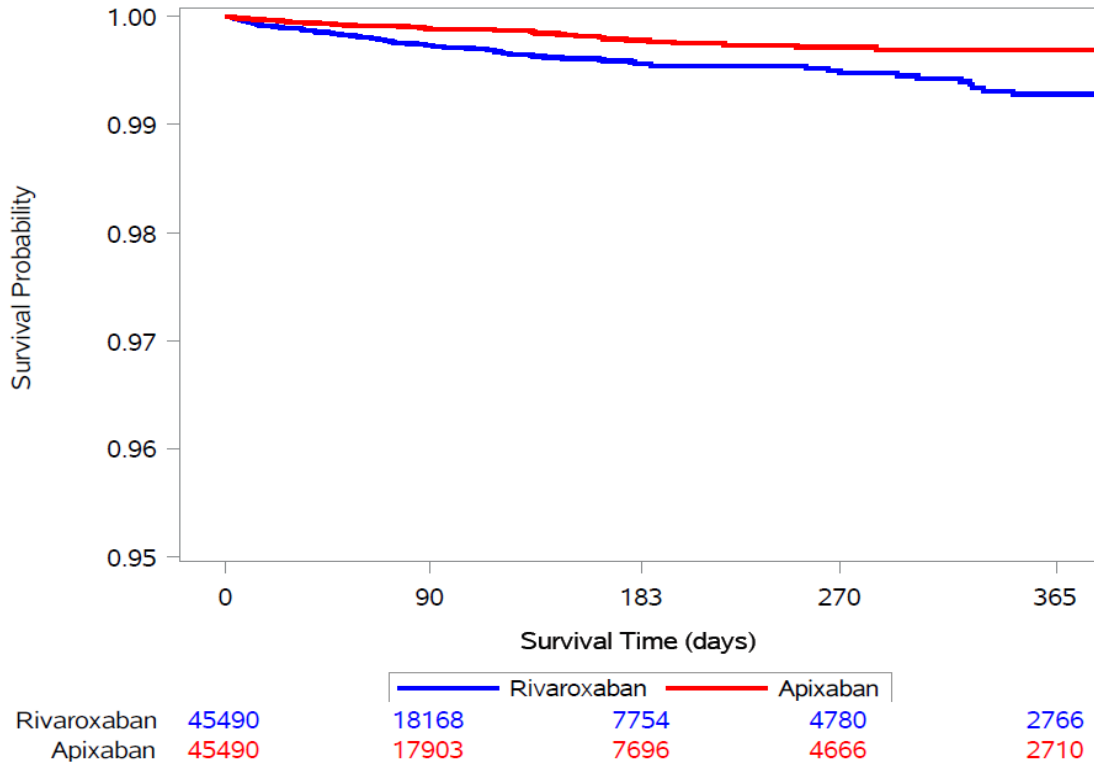


Figure 6c. Kaplan Meier Survival Curves for Risk of Gastrointestinal Bleeding among Dabigatran and Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, Unconditional Matched Cohort

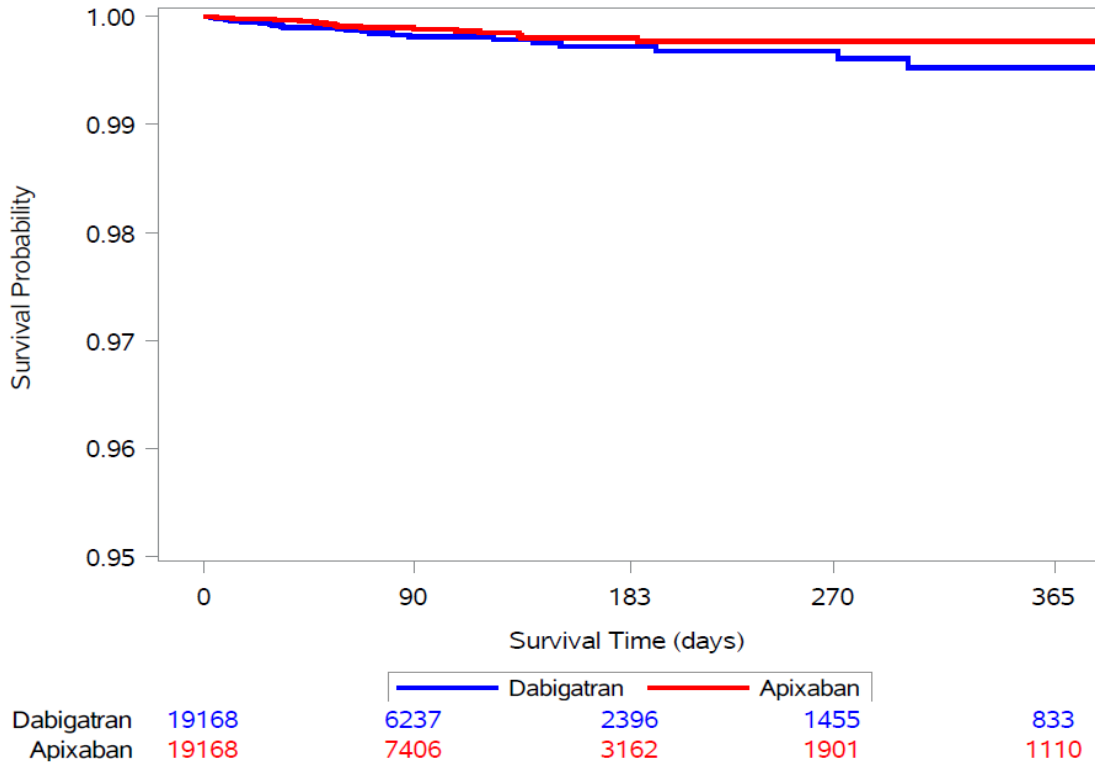


Figure 7a. Kaplan Meier Survival Curves for Risk of Intracranial Hemorrhage among Rivaroxaban and Dabigatran Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, Unconditional Matched Cohort

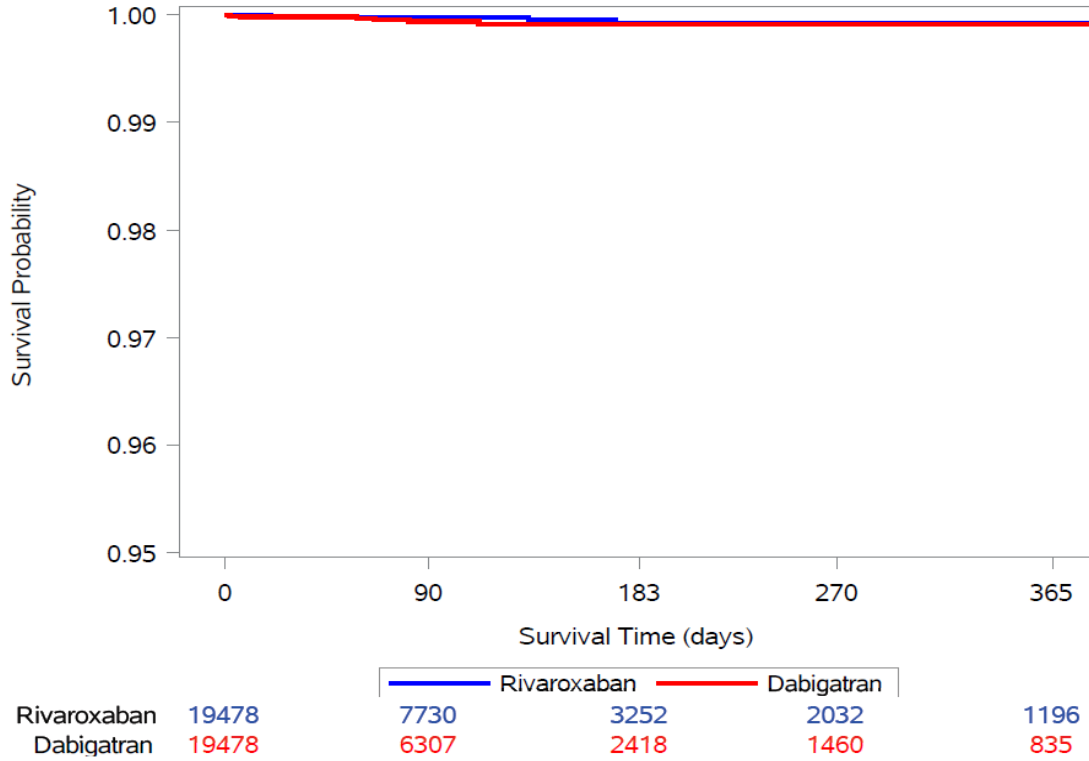


Figure 7b. Kaplan Meier Survival Curves for Risk of Intracranial Hemorrhage among Rivaroxaban and Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, Unconditional Matched Cohort

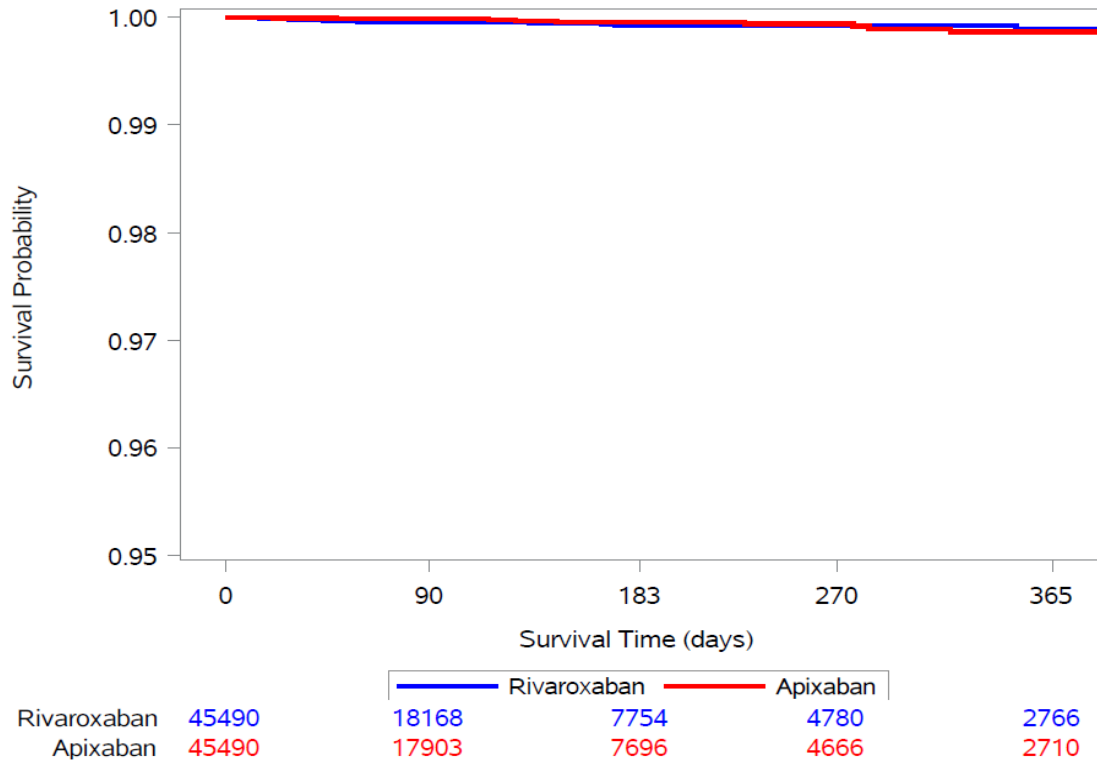
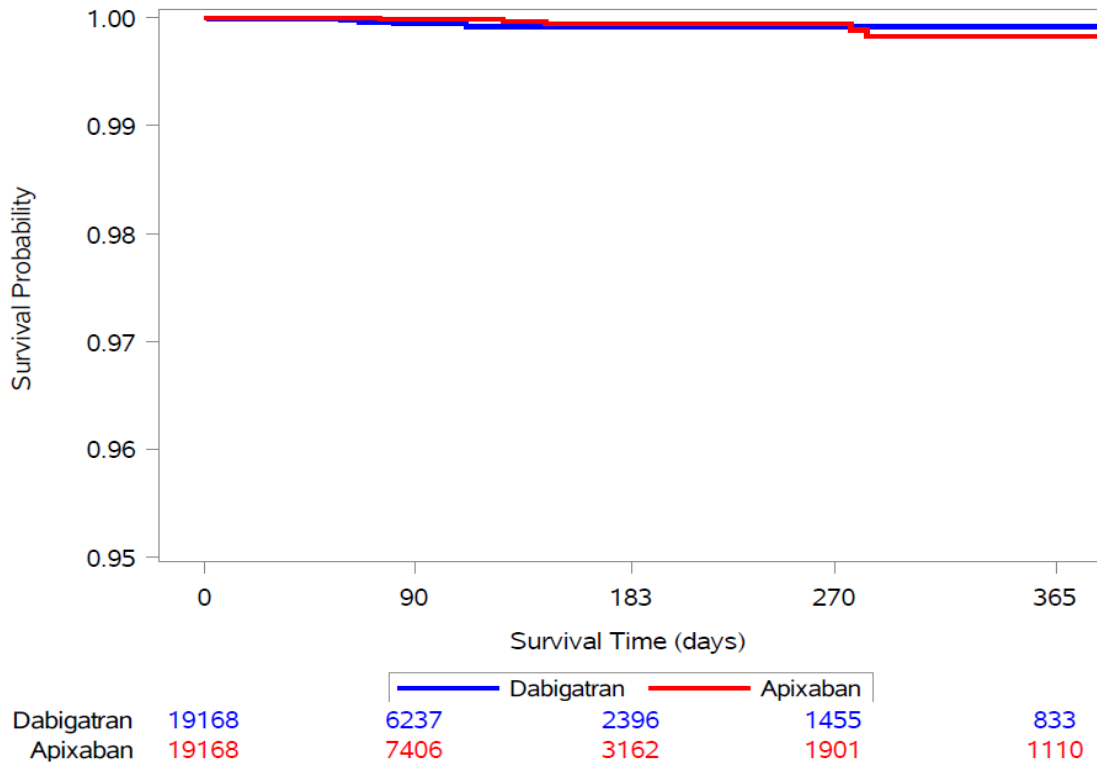


Figure 7c. Kaplan Meier Survival Curves for Risk of Intracranial Hemorrhage among Dabigatran and Apixaban Users in the Sentinel Distributed Database (SDD) between October 19, 2010 and February 29, 2020, Unconditional Matched Cohort



Appendix A. Dates of Available Data for Each Data Partner (DP) as of Request Distribution Date (September 1, 2020)

DPID	DP Start Date¹	DP End Date¹
DP01	01/01/2008	02/29/2020
DP02	01/01/2006	01/31/2020
DP03	06/01/2007	10/31/2019
DP04	01/01/2008	09/30/2019
DP05	01/01/2000	12/31/2017

¹The start and end dates are based on the minimum and maximum dates within each DP. The month with the maximum date must have at least 80% of the number of records in the previous month.

Appendix B. List of Generic and Brand Names of Medical Products Used to Define Exposures in this Request

Generic Name	Brand Name
apixaban	Eliquis
dabigatran etexilate mesylate	Pradaxa
rivaroxaban	Xarelto

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
Ischemic Stroke			
433.01	Occlusion and stenosis of basilar artery with cerebral infarction	ICD-9-CM	Diagnosis
433.11	Occlusion and stenosis of carotid artery with cerebral infarction	ICD-9-CM	Diagnosis
433.21	Occlusion and stenosis of vertebral artery with cerebral infarction	ICD-9-CM	Diagnosis
433.31	Occlusion and stenosis of multiple and bilateral precerebral arteries with cerebral infarction	ICD-9-CM	Diagnosis
433.81	Occlusion and stenosis of other specified precerebral artery with cerebral infarction	ICD-9-CM	Diagnosis
433.91	Occlusion and stenosis of unspecified precerebral artery with cerebral infarction	ICD-9-CM	Diagnosis
434.01	Cerebral thrombosis with cerebral infarction	ICD-9-CM	Diagnosis
434.11	Cerebral embolism with cerebral infarction	ICD-9-CM	Diagnosis
434.91	Unspecified cerebral artery occlusion with cerebral infarction	ICD-9-CM	Diagnosis
436	Acute, but ill-defined, cerebrovascular disease	ICD-9-CM	Diagnosis
I63.22	Cerebral infarction due to unspecified occlusion or stenosis of basilar arteries	ICD-10-CM	Diagnosis
I63.139	Cerebral infarction due to embolism of unspecified carotid artery	ICD-10-CM	Diagnosis
I63.239	Cerebral infarction due to unspecified occlusion or stenosis of unspecified carotid arteries	ICD-10-CM	Diagnosis
I63.019	Cerebral infarction due to thrombosis of unspecified vertebral artery	ICD-10-CM	Diagnosis
I63.119	Cerebral infarction due to embolism of unspecified vertebral artery	ICD-10-CM	Diagnosis
I63.219	Cerebral infarction due to unspecified occlusion or stenosis of unspecified vertebral arteries	ICD-10-CM	Diagnosis
I63.59	Cerebral infarction due to unspecified occlusion or stenosis of other cerebral artery	ICD-10-CM	Diagnosis
I63.20	Cerebral infarction due to unspecified occlusion or stenosis of unspecified precerebral arteries	ICD-10-CM	Diagnosis
I63.30	Cerebral infarction due to thrombosis of unspecified cerebral artery	ICD-10-CM	Diagnosis
I63.40	Cerebral infarction due to embolism of unspecified cerebral artery	ICD-10-CM	Diagnosis
I63.50	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebral artery	ICD-10-CM	Diagnosis
I67.89	Other cerebrovascular disease	ICD-10-CM	Diagnosis
I63.00	Cerebral infarction due to thrombosis of unspecified precerebral artery	ICD-10-CM	Diagnosis
I63.011	Cerebral infarction due to thrombosis of right vertebral artery	ICD-10-CM	Diagnosis
I63.012	Cerebral infarction due to thrombosis of left vertebral artery	ICD-10-CM	Diagnosis
I63.013	Cerebral infarction due to thrombosis of bilateral vertebral arteries	ICD-10-CM	Diagnosis
I63.02	Cerebral infarction due to thrombosis of basilar artery	ICD-10-CM	Diagnosis
I63.031	Cerebral infarction due to thrombosis of right carotid artery	ICD-10-CM	Diagnosis
I63.032	Cerebral infarction due to thrombosis of left carotid artery	ICD-10-CM	Diagnosis
I63.033	Cerebral infarction due to thrombosis of bilateral carotid arteries	ICD-10-CM	Diagnosis
I63.039	Cerebral infarction due to thrombosis of unspecified carotid artery	ICD-10-CM	Diagnosis
I63.09	Cerebral infarction due to thrombosis of other precerebral artery	ICD-10-CM	Diagnosis
I63.10	Cerebral infarction due to embolism of unspecified precerebral artery	ICD-10-CM	Diagnosis
I63.111	Cerebral infarction due to embolism of right vertebral artery	ICD-10-CM	Diagnosis
I63.112	Cerebral infarction due to embolism of left vertebral artery	ICD-10-CM	Diagnosis
I63.113	Cerebral infarction due to embolism of bilateral vertebral arteries	ICD-10-CM	Diagnosis
I63.12	Cerebral infarction due to embolism of basilar artery	ICD-10-CM	Diagnosis
I63.131	Cerebral infarction due to embolism of right carotid artery	ICD-10-CM	Diagnosis
I63.132	Cerebral infarction due to embolism of left carotid artery	ICD-10-CM	Diagnosis
I63.133	Cerebral infarction due to embolism of bilateral carotid arteries	ICD-10-CM	Diagnosis
I63.19	Cerebral infarction due to embolism of other precerebral artery	ICD-10-CM	Diagnosis
I63.211	Cerebral infarction due to unspecified occlusion or stenosis of right vertebral arteries	ICD-10-CM	Diagnosis
I63.212	Cerebral infarction due to unspecified occlusion or stenosis of left vertebral arteries	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
I63.213	Cerebral infarction due to unspecified occlusion or stenosis of bilateral vertebral arteries	ICD-10-CM	Diagnosis
I63.231	Cerebral infarction due to unspecified occlusion or stenosis of right carotid arteries	ICD-10-CM	Diagnosis
I63.232	Cerebral infarction due to unspecified occlusion or stenosis of left carotid arteries	ICD-10-CM	Diagnosis
I63.233	Cerebral infarction due to unspecified occlusion or stenosis of bilateral carotid arteries	ICD-10-CM	Diagnosis
I63.29	Cerebral infarction due to unspecified occlusion or stenosis of other precerebral arteries	ICD-10-CM	Diagnosis
I63.311	Cerebral infarction due to thrombosis of right middle cerebral artery	ICD-10-CM	Diagnosis
I63.312	Cerebral infarction due to thrombosis of left middle cerebral artery	ICD-10-CM	Diagnosis
I63.313	Cerebral infarction due to thrombosis of bilateral middle cerebral arteries	ICD-10-CM	Diagnosis
I63.319	Cerebral infarction due to thrombosis of unspecified middle cerebral artery	ICD-10-CM	Diagnosis
I63.321	Cerebral infarction due to thrombosis of right anterior cerebral artery	ICD-10-CM	Diagnosis
I63.322	Cerebral infarction due to thrombosis of left anterior cerebral artery	ICD-10-CM	Diagnosis
I63.323	Cerebral infarction due to thrombosis of bilateral anterior arteries	ICD-10-CM	Diagnosis
I63.329	Cerebral infarction due to thrombosis of unspecified anterior cerebral artery	ICD-10-CM	Diagnosis
I63.331	Cerebral infarction due to thrombosis of right posterior cerebral artery	ICD-10-CM	Diagnosis
I63.332	Cerebral infarction due to thrombosis of left posterior cerebral artery	ICD-10-CM	Diagnosis
I63.333	Cerebral infarction to thrombosis of bilateral posterior arteries	ICD-10-CM	Diagnosis
I63.339	Cerebral infarction due to thrombosis of unspecified posterior cerebral artery	ICD-10-CM	Diagnosis
I63.341	Cerebral infarction due to thrombosis of right cerebellar artery	ICD-10-CM	Diagnosis
I63.342	Cerebral infarction due to thrombosis of left cerebellar artery	ICD-10-CM	Diagnosis
I63.343	Cerebral infarction to thrombosis of bilateral cerebellar arteries	ICD-10-CM	Diagnosis
I63.349	Cerebral infarction due to thrombosis of unspecified cerebellar artery	ICD-10-CM	Diagnosis
I63.39	Cerebral infarction due to thrombosis of other cerebral artery	ICD-10-CM	Diagnosis
I63.411	Cerebral infarction due to embolism of right middle cerebral artery	ICD-10-CM	Diagnosis
I63.412	Cerebral infarction due to embolism of left middle cerebral artery	ICD-10-CM	Diagnosis
I63.413	Cerebral infarction due to embolism of bilateral middle cerebral arteries	ICD-10-CM	Diagnosis
I63.419	Cerebral infarction due to embolism of unspecified middle cerebral artery	ICD-10-CM	Diagnosis
I63.421	Cerebral infarction due to embolism of right anterior cerebral artery	ICD-10-CM	Diagnosis
I63.422	Cerebral infarction due to embolism of left anterior cerebral artery	ICD-10-CM	Diagnosis
I63.423	Cerebral infarction due to embolism of bilateral anterior cerebral arteries	ICD-10-CM	Diagnosis
I63.429	Cerebral infarction due to embolism of unspecified anterior cerebral artery	ICD-10-CM	Diagnosis
I63.431	Cerebral infarction due to embolism of right posterior cerebral artery	ICD-10-CM	Diagnosis
I63.432	Cerebral infarction due to embolism of left posterior cerebral artery	ICD-10-CM	Diagnosis
I63.433	Cerebral infarction due to embolism of bilateral posterior cerebral arteries	ICD-10-CM	Diagnosis
I63.439	Cerebral infarction due to embolism of unspecified posterior cerebral artery	ICD-10-CM	Diagnosis
I63.441	Cerebral infarction due to embolism of right cerebellar artery	ICD-10-CM	Diagnosis
I63.442	Cerebral infarction due to embolism of left cerebellar artery	ICD-10-CM	Diagnosis
I63.443	Cerebral infarction due to embolism of bilateral cerebellar arteries	ICD-10-CM	Diagnosis
I63.449	Cerebral infarction due to embolism of unspecified cerebellar artery	ICD-10-CM	Diagnosis
I63.49	Cerebral infarction due to embolism of other cerebral artery	ICD-10-CM	Diagnosis
I63.511	Cerebral infarction due to unspecified occlusion or stenosis of right middle cerebral artery	ICD-10-CM	Diagnosis
I63.512	Cerebral infarction due to unspecified occlusion or stenosis of left middle cerebral artery	ICD-10-CM	Diagnosis
I63.513	Cerebral infarction due to unspecified occlusion or stenosis of bilateral middle arteries	ICD-10-CM	Diagnosis
I63.519	Cerebral infarction due to unspecified occlusion or stenosis of unspecified middle cerebral artery	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
I63.521	Cerebral infarction due to unspecified occlusion or stenosis of right anterior cerebral artery	ICD-10-CM	Diagnosis
I63.522	Cerebral infarction due to unspecified occlusion or stenosis of left anterior cerebral artery	ICD-10-CM	Diagnosis
I63.523	Cerebral infarction due to unspecified occlusion or stenosis of bilateral anterior arteries	ICD-10-CM	Diagnosis
I63.529	Cerebral infarction due to unspecified occlusion or stenosis of unspecified anterior cerebral artery	ICD-10-CM	Diagnosis
I63.531	Cerebral infarction due to unspecified occlusion or stenosis of right posterior cerebral artery	ICD-10-CM	Diagnosis
I63.532	Cerebral infarction due to unspecified occlusion or stenosis of left posterior cerebral artery	ICD-10-CM	Diagnosis
I63.533	Cerebral infarction due to unspecified occlusion or stenosis of bilateral posterior arteries	ICD-10-CM	Diagnosis
I63.539	Cerebral infarction due to unspecified occlusion or stenosis of unspecified posterior cerebral artery	ICD-10-CM	Diagnosis
I63.541	Cerebral infarction due to unspecified occlusion or stenosis of right cerebellar artery	ICD-10-CM	Diagnosis
I63.542	Cerebral infarction due to unspecified occlusion or stenosis of left cerebellar artery	ICD-10-CM	Diagnosis
I63.543	Cerebral infarction due to unspecified occlusion or stenosis of bilateral cerebellar arteries	ICD-10-CM	Diagnosis
I63.549	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebellar artery	ICD-10-CM	Diagnosis
I63.6	Cerebral infarction due to cerebral venous thrombosis, nonpyogenic	ICD-10-CM	Diagnosis
I63.8	Other cerebral infarction	ICD-10-CM	Diagnosis
I63.9	Cerebral infarction, unspecified	ICD-10-CM	Diagnosis
Intracranial Hemorrhage			
430	Subarachnoid hemorrhage	ICD-9-CM	Diagnosis
431	Intracerebral hemorrhage	ICD-9-CM	Diagnosis
432	Other and unspecified intracranial hemorrhage	ICD-9-CM	Diagnosis
432	Nontraumatic extradural hemorrhage	ICD-9-CM	Diagnosis
432.1	Subdural hemorrhage	ICD-9-CM	Diagnosis
432.9	Unspecified intracranial hemorrhage	ICD-9-CM	Diagnosis
852	Subarachnoid hemorrhage following injury without mention of open intracranial wound	ICD-9-CM	Diagnosis
852	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, unspecified state of consciousness	ICD-9-CM	Diagnosis
852.01	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, no loss of consciousness	ICD-9-CM	Diagnosis
852.02	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, brief (less than 1 hour) loss of consciousness	ICD-9-CM	Diagnosis
852.03	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
852.04	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
852.05	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
852.06	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
852.09	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, unspecified concussion	ICD-9-CM	Diagnosis
852.2	Subdural hemorrhage following injury without mention of open intracranial wound	ICD-9-CM	Diagnosis
852.2	Subdural hemorrhage following injury, without mention of open intracranial wound, unspecified state of consciousness	ICD-9-CM	Diagnosis
852.21	Subdural hemorrhage following injury, without mention of open intracranial wound, no loss of consciousness	ICD-9-CM	Diagnosis
852.22	Subdural hemorrhage following injury, without mention of open intracranial wound, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
852.23	Subdural hemorrhage following injury, without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
852.24	Subdural hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
852.25	Subdural hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
852.26	Subdural hemorrhage following injury, without mention of open intracranial wound, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
852.29	Subdural hemorrhage following injury, without mention of open intracranial wound, unspecified concussion	ICD-9-CM	Diagnosis
852.4	Extradural hemorrhage following injury without mention of open intracranial wound	ICD-9-CM	Diagnosis
852.4	Extradural hemorrhage following injury, without mention of open intracranial wound, unspecified state of consciousness	ICD-9-CM	Diagnosis
852.41	Extradural hemorrhage following injury, without mention of open intracranial wound, no loss of consciousness	ICD-9-CM	Diagnosis
852.42	Extradural hemorrhage following injury, without mention of open intracranial wound, brief (less than 1 hour) loss of consciousness	ICD-9-CM	Diagnosis
852.43	Extradural hemorrhage following injury, without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
852.44	Extradural hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
852.45	Extradural hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
852.46	Extradural hemorrhage following injury, without mention of open intracranial wound, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
852.49	Extradural hemorrhage following injury, without mention of open intracranial wound, unspecified concussion	ICD-9-CM	Diagnosis
853	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound	ICD-9-CM	Diagnosis
853	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, unspecified state of consciousness	ICD-9-CM	Diagnosis
853.01	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, no loss of consciousness	ICD-9-CM	Diagnosis
853.02	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, brief (less than 1 hour) loss of consciousness	ICD-9-CM	Diagnosis
853.03	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
853.04	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to preexisting conscious level	ICD-9-CM	Diagnosis
853.05	Other and unspecified intracranial hemorrhage following injury. Without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
853.06	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
853.09	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, unspecified concussion	ICD-9-CM	Diagnosis
I60.00	Nontraumatic subarachnoid hemorrhage from unspecified carotid siphon and bifurcation	ICD-10-CM	Diagnosis
I60.01	Nontraumatic subarachnoid hemorrhage from right carotid siphon and bifurcation	ICD-10-CM	Diagnosis
I60.02	Nontraumatic subarachnoid hemorrhage from left carotid siphon and bifurcation	ICD-10-CM	Diagnosis
I60.10	Nontraumatic subarachnoid hemorrhage from unspecified middle cerebral artery	ICD-10-CM	Diagnosis
I60.11	Nontraumatic subarachnoid hemorrhage from right middle cerebral artery	ICD-10-CM	Diagnosis
I60.12	Nontraumatic subarachnoid hemorrhage from left middle cerebral artery	ICD-10-CM	Diagnosis
I60.2	Nontraumatic subarachnoid hemorrhage from anterior communicating artery	ICD-10-CM	Diagnosis
I60.30	Nontraumatic subarachnoid hemorrhage from unspecified posterior communicating artery	ICD-10-CM	Diagnosis
I60.31	Nontraumatic subarachnoid hemorrhage from right posterior communicating artery	ICD-10-CM	Diagnosis
I60.32	Nontraumatic subarachnoid hemorrhage from left posterior communicating artery	ICD-10-CM	Diagnosis
I60.4	Nontraumatic subarachnoid hemorrhage from basilar artery	ICD-10-CM	Diagnosis
I60.50	Nontraumatic subarachnoid hemorrhage from unspecified vertebral artery	ICD-10-CM	Diagnosis
I60.51	Nontraumatic subarachnoid hemorrhage from right vertebral artery	ICD-10-CM	Diagnosis
I60.52	Nontraumatic subarachnoid hemorrhage from left vertebral artery	ICD-10-CM	Diagnosis
I60.6	Nontraumatic subarachnoid hemorrhage from other intracranial arteries	ICD-10-CM	Diagnosis
I60.7	Nontraumatic subarachnoid hemorrhage from unspecified intracranial artery	ICD-10-CM	Diagnosis
I60.8	Other nontraumatic subarachnoid hemorrhage	ICD-10-CM	Diagnosis
I60.9	Nontraumatic subarachnoid hemorrhage, unspecified	ICD-10-CM	Diagnosis
I61.0	Nontraumatic intracerebral hemorrhage in hemisphere, subcortical	ICD-10-CM	Diagnosis
I61.1	Nontraumatic intracerebral hemorrhage in hemisphere, cortical	ICD-10-CM	Diagnosis
I61.2	Nontraumatic intracerebral hemorrhage in hemisphere, unspecified	ICD-10-CM	Diagnosis
I61.3	Nontraumatic intracerebral hemorrhage in brain stem	ICD-10-CM	Diagnosis
I61.4	Nontraumatic intracerebral hemorrhage in cerebellum	ICD-10-CM	Diagnosis
I61.5	Nontraumatic intracerebral hemorrhage, intraventricular	ICD-10-CM	Diagnosis
I61.6	Nontraumatic intracerebral hemorrhage, multiple localized	ICD-10-CM	Diagnosis
I61.8	Other nontraumatic intracerebral hemorrhage	ICD-10-CM	Diagnosis
I61.9	Nontraumatic intracerebral hemorrhage, unspecified	ICD-10-CM	Diagnosis
I62.00	Nontraumatic subdural hemorrhage, unspecified	ICD-10-CM	Diagnosis
I62.01	Nontraumatic acute subdural hemorrhage	ICD-10-CM	Diagnosis
I62.02	Nontraumatic subacute subdural hemorrhage	ICD-10-CM	Diagnosis
I62.03	Nontraumatic chronic subdural hemorrhage	ICD-10-CM	Diagnosis
I62.1	Nontraumatic extradural hemorrhage	ICD-10-CM	Diagnosis
I62.9	Nontraumatic intracranial hemorrhage, unspecified	ICD-10-CM	Diagnosis
S06.340A	Traumatic hemorrhage of right cerebrum without loss of consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.341A	Traumatic hemorrhage of right cerebrum with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S06.342A	Traumatic hemorrhage of right cerebrum with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.343A	Traumatic hemorrhage of right cerebrum with loss of consciousness of 1 hours to 5 hours 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.344A	Traumatic hemorrhage of right cerebrum with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM	Diagnosis
S06.345A	Traumatic hemorrhage of right cerebrum with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM	Diagnosis
S06.346A	Traumatic hemorrhage of right cerebrum with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM	Diagnosis
S06.347A	Traumatic hemorrhage of right cerebrum with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.348A	Traumatic hemorrhage of right cerebrum with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.349A	Traumatic hemorrhage of right cerebrum with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM	Diagnosis
S06.350A	Traumatic hemorrhage of left cerebrum without loss of consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.351A	Traumatic hemorrhage of left cerebrum with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM	Diagnosis
S06.352A	Traumatic hemorrhage of left cerebrum with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.353A	Traumatic hemorrhage of left cerebrum with loss of consciousness of 1 hours to 5 hours 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.354A	Traumatic hemorrhage of left cerebrum with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM	Diagnosis
S06.355A	Traumatic hemorrhage of left cerebrum with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM	Diagnosis
S06.356A	Traumatic hemorrhage of left cerebrum with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM	Diagnosis
S06.357A	Traumatic hemorrhage of left cerebrum with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.358A	Traumatic hemorrhage of left cerebrum with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.359A	Traumatic hemorrhage of left cerebrum with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM	Diagnosis
S06.360A	Traumatic hemorrhage of cerebrum, unspecified, without loss of consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.361A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM	Diagnosis
S06.362A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.363A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 1 hours to 5 hours 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.364A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S06.365A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM	Diagnosis
S06.366A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM	Diagnosis
S06.367A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.368A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.369A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM	Diagnosis
S06.4X0A	Epidural hemorrhage without loss of consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.4X1A	Epidural hemorrhage with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM	Diagnosis
S06.4X2A	Epidural hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.4X3A	Epidural hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.4X4A	Epidural hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM	Diagnosis
S06.4X5A	Epidural hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM	Diagnosis
S06.4X6A	Epidural hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM	Diagnosis
S06.4X7A	Epidural hemorrhage with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.4X8A	Epidural hemorrhage with loss of consciousness of any duration with death due to other causes prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.4X9A	Epidural hemorrhage with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM	Diagnosis
S06.5X0A	Traumatic subdural hemorrhage without loss of consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.5X1A	Traumatic subdural hemorrhage with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM	Diagnosis
S06.5X2A	Traumatic subdural hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.5X3A	Traumatic subdural hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.5X4A	Traumatic subdural hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM	Diagnosis
S06.5X5A	Traumatic subdural hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM	Diagnosis
S06.5X6A	Traumatic subdural hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM	Diagnosis
S06.5X7A	Traumatic subdural hemorrhage with loss of consciousness of any duration with death due to brain injury before regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.5X8A	Traumatic subdural hemorrhage with loss of consciousness of any duration with death due to other cause before regaining consciousness, initial encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S06.5X9A	Traumatic subdural hemorrhage with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM	Diagnosis
S06.6X0A	Traumatic subarachnoid hemorrhage without loss of consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.6X1A	Traumatic subarachnoid hemorrhage with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM	Diagnosis
S06.6X2A	Traumatic subarachnoid hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.6X3A	Traumatic subarachnoid hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.6X4A	Traumatic subarachnoid hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM	Diagnosis
S06.6X5A	Traumatic subarachnoid hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM	Diagnosis
S06.6X6A	Traumatic subarachnoid hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM	Diagnosis
S06.6X7A	Traumatic subarachnoid hemorrhage with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.6X8A	Traumatic subarachnoid hemorrhage with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.6X9A	Traumatic subarachnoid hemorrhage with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM	Diagnosis
Gastrointestinal Bleeding - List 1			
455.2	Internal hemorrhoids with other complication	ICD-9-CM	Diagnosis
455.5	External hemorrhoids with other complication	ICD-9-CM	Diagnosis
455.8	Unspecified hemorrhoids with other complication	ICD-9-CM	Diagnosis
456	Esophageal varices with bleeding	ICD-9-CM	Diagnosis
456.2	Esophageal varices with bleeding in diseases classified elsewhere	ICD-9-CM	Diagnosis
459	Unspecified hemorrhage	ICD-9-CM	Diagnosis
530.7	Gastroesophageal laceration-hemorrhage syndrome	ICD-9-CM	Diagnosis
530.82	Esophageal hemorrhage	ICD-9-CM	Diagnosis
531	Acute gastric ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
531.01	Acute gastric ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
531.2	Acute gastric ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.21	Acute gastric ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
531.4	Chronic or unspecified gastric ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
531.41	Chronic or unspecified gastric ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
531.6	Chronic or unspecified gastric ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
531.61	Chronic or unspecified gastric ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
532	Acute duodenal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
532.01	Acute duodenal ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
532.2	Acute duodenal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
532.21	Acute duodenal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
532.4	Duodenal ulcer, chronic or unspecified, with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
532.41	Chronic or unspecified duodenal ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
532.6	Chronic or unspecified duodenal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
532.61	Chronic or unspecified duodenal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
533	Acute peptic ulcer, unspecified site, with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
533.01	Acute peptic ulcer, unspecified site, with hemorrhage and obstruction	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
533.2	Acute peptic ulcer, unspecified site, with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
533.21	Acute peptic ulcer, unspecified site, with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
533.4	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
533.41	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
533.6	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
533.61	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
534	Acute gastrojejunal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
534.01	Acute gastrojejunal ulcer, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
534.2	Acute gastrojejunal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
534.21	Acute gastrojejunal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
534.4	Chronic or unspecified gastrojejunal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
534.41	Chronic or unspecified gastrojejunal ulcer, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
534.6	Chronic or unspecified gastrojejunal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
534.61	Chronic or unspecified gastrojejunal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
535.01	Acute gastritis with hemorrhage	ICD-9-CM	Diagnosis
535.11	Atrophic gastritis with hemorrhage	ICD-9-CM	Diagnosis
535.21	Gastric mucosal hypertrophy with hemorrhage	ICD-9-CM	Diagnosis
535.31	Alcoholic gastritis with hemorrhage	ICD-9-CM	Diagnosis
535.41	Other specified gastritis with hemorrhage	ICD-9-CM	Diagnosis
535.51	Unspecified gastritis and gastroduodenitis with hemorrhage	ICD-9-CM	Diagnosis
535.61	Duodenitis with hemorrhage	ICD-9-CM	Diagnosis
537.83	Angiodysplasia of stomach and duodenum with hemorrhage	ICD-9-CM	Diagnosis
562.02	Diverticulosis of small intestine with hemorrhage	ICD-9-CM	Diagnosis
562.03	Diverticulitis of small intestine with hemorrhage	ICD-9-CM	Diagnosis
562.12	Diverticulosis of colon with hemorrhage	ICD-9-CM	Diagnosis
562.13	Diverticulitis of colon with hemorrhage	ICD-9-CM	Diagnosis
568.81	Hemoperitoneum (nontraumatic)	ICD-9-CM	Diagnosis
569.3	Hemorrhage of rectum and anus	ICD-9-CM	Diagnosis
569.85	Angiodysplasia of intestine with hemorrhage	ICD-9-CM	Diagnosis
578	Hematemesis	ICD-9-CM	Diagnosis
578.1	Blood in stool	ICD-9-CM	Diagnosis
578.9	Hemorrhage of gastrointestinal tract, unspecified	ICD-9-CM	Diagnosis
I85.01	Esophageal varices with bleeding	ICD-10-CM	Diagnosis
I85.11	Secondary esophageal varices with bleeding	ICD-10-CM	Diagnosis
K22.6	Gastro-esophageal laceration-hemorrhage syndrome	ICD-10-CM	Diagnosis
K22.8	Other specified diseases of esophagus	ICD-10-CM	Diagnosis
K25.0	Acute gastric ulcer with hemorrhage	ICD-10-CM	Diagnosis
K25.2	Acute gastric ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K25.4	Chronic or unspecified gastric ulcer with hemorrhage	ICD-10-CM	Diagnosis
K25.6	Chronic or unspecified gastric ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K26.0	Acute duodenal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K26.2	Acute duodenal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
K26.4	Chronic or unspecified duodenal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K26.6	Chronic or unspecified duodenal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K27.0	Acute peptic ulcer, site unspecified, with hemorrhage	ICD-10-CM	Diagnosis
K27.2	Acute peptic ulcer, site unspecified, with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K27.4	Chronic or unspecified peptic ulcer, site unspecified, with hemorrhage	ICD-10-CM	Diagnosis
K27.6	Chronic or unspecified peptic ulcer, site unspecified, with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K28.0	Acute gastrojejunal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K28.2	Acute gastrojejunal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K28.4	Chronic or unspecified gastrojejunal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K28.6	Chronic or unspecified gastrojejunal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K29.01	Acute gastritis with bleeding	ICD-10-CM	Diagnosis
K29.21	Alcoholic gastritis with bleeding	ICD-10-CM	Diagnosis
K29.31	Chronic superficial gastritis with bleeding	ICD-10-CM	Diagnosis
K29.41	Chronic atrophic gastritis with bleeding	ICD-10-CM	Diagnosis
K29.51	Unspecified chronic gastritis with bleeding	ICD-10-CM	Diagnosis
K29.61	Other gastritis with bleeding	ICD-10-CM	Diagnosis
K29.71	Gastritis, unspecified, with bleeding	ICD-10-CM	Diagnosis
K29.81	Duodenitis with bleeding	ICD-10-CM	Diagnosis
K29.91	Gastroduodenitis, unspecified, with bleeding	ICD-10-CM	Diagnosis
K31.811	Angiodysplasia of stomach and duodenum with bleeding	ICD-10-CM	Diagnosis
K55.21	Angiodysplasia of colon with hemorrhage	ICD-10-CM	Diagnosis
K56.699	Other intestinal obstruction unspecified as to partial versus complete obstruction	ICD-10-CM	Diagnosis
K57.01	Diverticulitis of small intestine with perforation and abscess with bleeding	ICD-10-CM	Diagnosis
K57.11	Diverticulosis of small intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.13	Diverticulitis of small intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.21	Diverticulitis of large intestine with perforation and abscess with bleeding	ICD-10-CM	Diagnosis
K57.31	Diverticulosis of large intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.33	Diverticulitis of large intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.41	Diverticulitis of both small and large intestine with perforation and abscess with bleeding	ICD-10-CM	Diagnosis
K57.51	Diverticulosis of both small and large intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.53	Diverticulitis of both small and large intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.81	Diverticulitis of intestine, part unspecified, with perforation and abscess with bleeding	ICD-10-CM	Diagnosis
K57.91	Diverticulosis of intestine, part unspecified, without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.93	Diverticulitis of intestine, part unspecified, without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K62.5	Hemorrhage of anus and rectum	ICD-10-CM	Diagnosis
K64.0	First degree hemorrhoids	ICD-10-CM	Diagnosis
K64.1	Second degree hemorrhoids	ICD-10-CM	Diagnosis
K64.2	Third degree hemorrhoids	ICD-10-CM	Diagnosis
K64.3	Fourth degree hemorrhoids	ICD-10-CM	Diagnosis
K64.4	Residual hemorrhoidal skin tags	ICD-10-CM	Diagnosis
K64.8	Other hemorrhoids	ICD-10-CM	Diagnosis
K66.1	Hemoperitoneum	ICD-10-CM	Diagnosis
K92.0	Hematemesis	ICD-10-CM	Diagnosis
K92.1	Melena	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
K92.2	Gastrointestinal hemorrhage, unspecified	ICD-10-CM	Diagnosis
R58	Hemorrhage, not elsewhere classified	ICD-10-CM	Diagnosis
Gastrointestinal Bleeding - List 2			
455.0	Internal hemorrhoids without mention of complication	ICD-9-CM	Diagnosis
455.1	Internal thrombosed hemorrhoids	ICD-9-CM	Diagnosis
455.3	External hemorrhoids without mention of complication	ICD-9-CM	Diagnosis
455.4	External thrombosed hemorrhoids	ICD-9-CM	Diagnosis
455.6	Unspecified hemorrhoids without mention of complication	ICD-9-CM	Diagnosis
455.7	Unspecified thrombosed hemorrhoids	ICD-9-CM	Diagnosis
531.1	Acute gastric ulcer with perforation	ICD-9-CM	Diagnosis
531.3	Acute gastric ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
531.5	Chronic or unspecified gastric ulcer with perforation	ICD-9-CM	Diagnosis
531.7	Chronic gastric ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
531.9	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
532.1	Acute duodenal ulcer with perforation	ICD-9-CM	Diagnosis
532.3	Acute duodenal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
532.5	Chronic or unspecified duodenal ulcer with perforation	ICD-9-CM	Diagnosis
532.7	Chronic duodenal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
532.9	Duodenal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
533.1	Acute peptic ulcer, unspecified site, with perforation	ICD-9-CM	Diagnosis
533.3	Acute peptic ulcer, unspecified site, without mention of hemorrhage and perforation	ICD-9-CM	Diagnosis
533.5	Chronic or unspecified peptic ulcer, unspecified site, with perforation	ICD-9-CM	Diagnosis
533.7	Chronic peptic ulcer, unspecified site, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
533.9	Peptic ulcer, unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
534.1	Acute gastrojejunal ulcer with perforation	ICD-9-CM	Diagnosis
534.3	Acute gastrojejunal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
534.5	Chronic or unspecified gastrojejunal ulcer with perforation	ICD-9-CM	Diagnosis
534.7	Chronic gastrojejunal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
534.9	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
535.00	Acute gastritis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.10	Atrophic gastritis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.20	Gastric mucosal hypertrophy without mention of hemorrhage	ICD-9-CM	Diagnosis
535.30	Alcoholic gastritis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.40	Other specified gastritis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.50	Unspecified gastritis and gastroduodenitis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.60	Duodenitis without mention of hemorrhage	ICD-9-CM	Diagnosis
562.00	Diverticulosis of small intestine (without mention of hemorrhage)	ICD-9-CM	Diagnosis
562.01	Diverticulitis of small intestine (without mention of hemorrhage)	ICD-9-CM	Diagnosis
562.10	Diverticulosis of colon (without mention of hemorrhage)	ICD-9-CM	Diagnosis
562.11	Diverticulitis of colon (without mention of hemorrhage)	ICD-9-CM	Diagnosis
530.1	Esophagitis	ICD-9-CM	Diagnosis
K29.00	Acute gastritis without bleeding	ICD-10-CM	Diagnosis
K29.20	Alcoholic gastritis without bleeding	ICD-10-CM	Diagnosis
K29.30	Chronic superficial gastritis without bleeding	ICD-10-CM	Diagnosis
K29.40	Chronic atrophic gastritis without bleeding	ICD-10-CM	Diagnosis
K29.50	Unspecified chronic gastritis without bleeding	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
K29.60	Other gastritis without bleeding	ICD-10-CM	Diagnosis
K29.70	Gastritis, unspecified, without bleeding	ICD-10-CM	Diagnosis
K29.80	Duodenitis without bleeding	ICD-10-CM	Diagnosis
K29.90	Gastroduodenitis, unspecified, without bleeding	ICD-10-CM	Diagnosis
K57.00	Diverticulitis of small intestine with perforation and abscess without bleeding	ICD-10-CM	Diagnosis
K57.10	Diverticulosis of small intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.12	Diverticulitis of small intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.20	Diverticulitis of large intestine with perforation and abscess without bleeding	ICD-10-CM	Diagnosis
K57.30	Diverticulosis of large intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.32	Diverticulitis of large intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.40	Diverticulitis of both small and large intestine with perforation and abscess without bleeding	ICD-10-CM	Diagnosis
K57.50	Diverticulosis of both small and large intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.52	Diverticulitis of both small and large intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.80	Diverticulitis of intestine, part unspecified, with perforation and abscess without bleeding	ICD-10-CM	Diagnosis
K57.90	Diverticulosis of intestine, part unspecified, without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.92	Diverticulitis of intestine, part unspecified, without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K64.0	First degree hemorrhoids	ICD-10-CM	Diagnosis
K64.1	Second degree hemorrhoids	ICD-10-CM	Diagnosis
K64.2	Third degree hemorrhoids	ICD-10-CM	Diagnosis
K64.3	Fourth degree hemorrhoids	ICD-10-CM	Diagnosis
K64.4	Residual hemorrhoidal skin tags	ICD-10-CM	Diagnosis
K64.5	Perianal venous thrombosis	ICD-10-CM	Diagnosis
K64.8	Other hemorrhoids	ICD-10-CM	Diagnosis
K64.9	Unspecified hemorrhoids	ICD-10-CM	Diagnosis
Major Extracranial Bleeding - List 1			
423.0	Hemopericardium	ICD-9-CM	Diagnosis
455.2	Internal hemorrhoids with other complication	ICD-9-CM	Diagnosis
455.5	External hemorrhoids with other complication	ICD-9-CM	Diagnosis
455.8	Unspecified hemorrhoids with other complication	ICD-9-CM	Diagnosis
456.0	Esophageal varices with bleeding	ICD-9-CM	Diagnosis
456.20	Esophageal varices with bleeding in diseases classified elsewhere	ICD-9-CM	Diagnosis
459.0	Unspecified hemorrhage	ICD-9-CM	Diagnosis
530.7	Gastroesophageal laceration-hemorrhage syndrome	ICD-9-CM	Diagnosis
530.82	Esophageal hemorrhage	ICD-9-CM	Diagnosis
531.0	Acute gastric ulcer with hemorrhage	ICD-9-CM	Diagnosis
531.00	Acute gastric ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
531.01	Acute gastric ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
531.2	Acute gastric ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
531.20	Acute gastric ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.21	Acute gastric ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
531.4	Chronic or unspecified gastric ulcer with hemorrhage	ICD-9-CM	Diagnosis
531.40	Chronic or unspecified gastric ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
531.41	Chronic or unspecified gastric ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
531.6	Chronic or unspecified gastric ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
531.60	Chronic or unspecified gastric ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.61	Chronic or unspecified gastric ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
532.0	Acute duodenal ulcer with hemorrhage	ICD-9-CM	Diagnosis
532.00	Acute duodenal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
532.01	Acute duodenal ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
532.2	Acute duodenal ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
532.20	Acute duodenal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
532.21	Acute duodenal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
532.4	Chronic or unspecified duodenal ulcer with hemorrhage	ICD-9-CM	Diagnosis
532.40	Duodenal ulcer, chronic or unspecified, with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
532.41	Chronic or unspecified duodenal ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
532.6	Chronic or unspecified duodenal ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
532.60	Chronic or unspecified duodenal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
532.61	Chronic or unspecified duodenal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
533.0	Acute peptic ulcer, unspecified site, with hemorrhage	ICD-9-CM	Diagnosis
533.00	Acute peptic ulcer, unspecified site, with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
533.01	Acute peptic ulcer, unspecified site, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
533.2	Acute peptic ulcer, unspecified site, with hemorrhage and perforation	ICD-9-CM	Diagnosis
533.20	Acute peptic ulcer, unspecified site, with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
533.21	Acute peptic ulcer, unspecified site, with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
533.4	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage	ICD-9-CM	Diagnosis
533.40	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
533.41	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
533.6	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage and perforation	ICD-9-CM	Diagnosis
533.60	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
533.61	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
534.0	Acute gastrojejunal ulcer with hemorrhage	ICD-9-CM	Diagnosis
534.00	Acute gastrojejunal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
534.01	Acute gastrojejunal ulcer, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
534.2	Acute gastrojejunal ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
534.20	Acute gastrojejunal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
534.21	Acute gastrojejunal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
534.4	Chronic or unspecified gastrojejunal ulcer with hemorrhage	ICD-9-CM	Diagnosis
534.40	Chronic or unspecified gastrojejunal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
534.41	Chronic or unspecified gastrojejunal ulcer, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
534.6	Chronic or unspecified gastrojejunal ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
534.60	Chronic or unspecified gastrojejunal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
534.61	Chronic or unspecified gastrojejunal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
535.01	Acute gastritis with hemorrhage	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
535.11	Atrophic gastritis with hemorrhage	ICD-9-CM	Diagnosis
535.21	Gastric mucosal hypertrophy with hemorrhage	ICD-9-CM	Diagnosis
535.31	Alcoholic gastritis with hemorrhage	ICD-9-CM	Diagnosis
535.41	Other specified gastritis with hemorrhage	ICD-9-CM	Diagnosis
535.51	Unspecified gastritis and gastroduodenitis with hemorrhage	ICD-9-CM	Diagnosis
535.61	Duodenitis with hemorrhage	ICD-9-CM	Diagnosis
537.83	Angiodysplasia of stomach and duodenum with hemorrhage	ICD-9-CM	Diagnosis
562.02	Diverticulosis of small intestine with hemorrhage	ICD-9-CM	Diagnosis
562.03	Diverticulitis of small intestine with hemorrhage	ICD-9-CM	Diagnosis
562.12	Diverticulosis of colon with hemorrhage	ICD-9-CM	Diagnosis
562.13	Diverticulitis of colon with hemorrhage	ICD-9-CM	Diagnosis
568.81	Hemoperitoneum (nontraumatic)	ICD-9-CM	Diagnosis
569.3	Hemorrhage of rectum and anus	ICD-9-CM	Diagnosis
569.85	Angiodysplasia of intestine with hemorrhage	ICD-9-CM	Diagnosis
578.0	Hematemesis	ICD-9-CM	Diagnosis
578.1	Blood in stool	ICD-9-CM	Diagnosis
578.9	Hemorrhage of gastrointestinal tract, unspecified	ICD-9-CM	Diagnosis
593.81	Vascular disorders of kidney	ICD-9-CM	Diagnosis
599.7	Hematuria	ICD-9-CM	Diagnosis
623.8	Other specified noninflammatory disorder of vagina	ICD-9-CM	Diagnosis
626.2	Excessive or frequent menstruation	ICD-9-CM	Diagnosis
626.6	Metrorrhagia	ICD-9-CM	Diagnosis
719.1	Hemarthrosis	ICD-9-CM	Diagnosis
719.10	Hemarthrosis, site unspecified	ICD-9-CM	Diagnosis
719.11	Hemarthrosis, shoulder region	ICD-9-CM	Diagnosis
719.12	Hemarthrosis, upper arm	ICD-9-CM	Diagnosis
719.13	Hemarthrosis, forearm	ICD-9-CM	Diagnosis
719.14	Hemarthrosis, hand	ICD-9-CM	Diagnosis
719.15	Hemarthrosis, pelvic region and thigh	ICD-9-CM	Diagnosis
719.16	Hemarthrosis, lower leg	ICD-9-CM	Diagnosis
719.17	Hemarthrosis, ankle and foot	ICD-9-CM	Diagnosis
719.18	Hemarthrosis, other specified site	ICD-9-CM	Diagnosis
719.19	Hemarthrosis, multiple sites	ICD-9-CM	Diagnosis
784.7	Epistaxis	ICD-9-CM	Diagnosis
784.8	Hemorrhage from throat	ICD-9-CM	Diagnosis
786.3	Hemoptysis	ICD-9-CM	Diagnosis
I31.2	Hemopericardium, not elsewhere classified	ICD-10-CM	Diagnosis
I85.01	Esophageal varices with bleeding	ICD-10-CM	Diagnosis
I85.11	Secondary esophageal varices with bleeding	ICD-10-CM	Diagnosis
K22.6	Gastro-esophageal laceration-hemorrhage syndrome	ICD-10-CM	Diagnosis
K22.8	Other specified diseases of esophagus	ICD-10-CM	Diagnosis
K25.0	Acute gastric ulcer with hemorrhage	ICD-10-CM	Diagnosis
K25.2	Acute gastric ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K25.4	Chronic or unspecified gastric ulcer with hemorrhage	ICD-10-CM	Diagnosis
K25.6	Chronic or unspecified gastric ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K26.0	Acute duodenal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K26.2	Acute duodenal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K26.4	Chronic or unspecified duodenal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K26.6	Chronic or unspecified duodenal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K27.0	Acute peptic ulcer, site unspecified, with hemorrhage	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
K27.2	Acute peptic ulcer, site unspecified, with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K27.4	Chronic or unspecified peptic ulcer, site unspecified, with hemorrhage	ICD-10-CM	Diagnosis
K27.6	Chronic or unspecified peptic ulcer, site unspecified, with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K28.0	Acute gastrojejunal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K28.2	Acute gastrojejunal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K28.4	Chronic or unspecified gastrojejunal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K28.6	Chronic or unspecified gastrojejunal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K29.01	Acute gastritis with bleeding	ICD-10-CM	Diagnosis
K29.21	Alcoholic gastritis with bleeding	ICD-10-CM	Diagnosis
K29.31	Chronic superficial gastritis with bleeding	ICD-10-CM	Diagnosis
K29.41	Chronic atrophic gastritis with bleeding	ICD-10-CM	Diagnosis
K29.51	Unspecified chronic gastritis with bleeding	ICD-10-CM	Diagnosis
K29.61	Other gastritis with bleeding	ICD-10-CM	Diagnosis
K29.71	Gastritis, unspecified, with bleeding	ICD-10-CM	Diagnosis
K29.81	Duodenitis with bleeding	ICD-10-CM	Diagnosis
K29.91	Gastroduodenitis, unspecified, with bleeding	ICD-10-CM	Diagnosis
K31.811	Angiodysplasia of stomach and duodenum with bleeding	ICD-10-CM	Diagnosis
K55.21	Angiodysplasia of colon with hemorrhage	ICD-10-CM	Diagnosis
K56.699	Other intestinal obstruction unspecified as to partial versus complete obstruction	ICD-10-CM	Diagnosis
K57.01	Diverticulitis of small intestine with perforation and abscess with bleeding	ICD-10-CM	Diagnosis
K57.11	Diverticulosis of small intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.13	Diverticulitis of small intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.21	Diverticulitis of large intestine with perforation and abscess with bleeding	ICD-10-CM	Diagnosis
K57.31	Diverticulosis of large intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.33	Diverticulitis of large intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.41	Diverticulitis of both small and large intestine with perforation and abscess with bleeding	ICD-10-CM	Diagnosis
K57.51	Diverticulosis of both small and large intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.53	Diverticulitis of both small and large intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.81	Diverticulitis of intestine, part unspecified, with perforation and abscess with bleeding	ICD-10-CM	Diagnosis
K57.91	Diverticulosis of intestine, part unspecified, without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.93	Diverticulitis of intestine, part unspecified, without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K62.5	Hemorrhage of anus and rectum	ICD-10-CM	Diagnosis
K64.0	First degree hemorrhoids	ICD-10-CM	Diagnosis
K64.1	Second degree hemorrhoids	ICD-10-CM	Diagnosis
K64.2	Third degree hemorrhoids	ICD-10-CM	Diagnosis
K64.3	Fourth degree hemorrhoids	ICD-10-CM	Diagnosis
K64.4	Residual hemorrhoidal skin tags	ICD-10-CM	Diagnosis
K64.8	Other hemorrhoids	ICD-10-CM	Diagnosis
K66.1	Hemoperitoneum	ICD-10-CM	Diagnosis
K92.0	Hematemesis	ICD-10-CM	Diagnosis
K92.1	Melena	ICD-10-CM	Diagnosis
K92.2	Gastrointestinal hemorrhage, unspecified	ICD-10-CM	Diagnosis
M25.00	Hemarthrosis, unspecified joint	ICD-10-CM	Diagnosis
M25.011	Hemarthrosis, right shoulder	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
M25.012	Hemarthrosis, left shoulder	ICD-10-CM	Diagnosis
M25.019	Hemarthrosis, unspecified shoulder	ICD-10-CM	Diagnosis
M25.021	Hemarthrosis, right elbow	ICD-10-CM	Diagnosis
M25.022	Hemarthrosis, left elbow	ICD-10-CM	Diagnosis
M25.029	Hemarthrosis, unspecified elbow	ICD-10-CM	Diagnosis
M25.031	Hemarthrosis, right wrist	ICD-10-CM	Diagnosis
M25.032	Hemarthrosis, left wrist	ICD-10-CM	Diagnosis
M25.039	Hemarthrosis, unspecified wrist	ICD-10-CM	Diagnosis
M25.041	Hemarthrosis, right hand	ICD-10-CM	Diagnosis
M25.042	Hemarthrosis, left hand	ICD-10-CM	Diagnosis
M25.049	Hemarthrosis, unspecified hand	ICD-10-CM	Diagnosis
M25.051	Hemarthrosis, right hip	ICD-10-CM	Diagnosis
M25.052	Hemarthrosis, left hip	ICD-10-CM	Diagnosis
M25.059	Hemarthrosis, unspecified hip	ICD-10-CM	Diagnosis
M25.061	Hemarthrosis, right knee	ICD-10-CM	Diagnosis
M25.062	Hemarthrosis, left knee	ICD-10-CM	Diagnosis
M25.069	Hemarthrosis, unspecified knee	ICD-10-CM	Diagnosis
M25.071	Hemarthrosis, right ankle	ICD-10-CM	Diagnosis
M25.072	Hemarthrosis, left ankle	ICD-10-CM	Diagnosis
M25.073	Hemarthrosis, unspecified ankle	ICD-10-CM	Diagnosis
M25.074	Hemarthrosis, right foot	ICD-10-CM	Diagnosis
M25.075	Hemarthrosis, left foot	ICD-10-CM	Diagnosis
M25.076	Hemarthrosis, unspecified foot	ICD-10-CM	Diagnosis
M25.08	Hemarthrosis, other specified site	ICD-10-CM	Diagnosis
N28.0	Ischemia and infarction of kidney	ICD-10-CM	Diagnosis
N89.8	Other specified noninflammatory disorders of vagina	ICD-10-CM	Diagnosis
N92.0	Excessive and frequent menstruation with regular cycle	ICD-10-CM	Diagnosis
N92.1	Excessive and frequent menstruation with irregular cycle	ICD-10-CM	Diagnosis
R04.0	Epistaxis	ICD-10-CM	Diagnosis
R04.1	Hemorrhage from throat	ICD-10-CM	Diagnosis
R58	Hemorrhage, not elsewhere classified	ICD-10-CM	Diagnosis
531.60	Chronic or unspecified gastric ulcer with hemorrhage and perforation	ICD-10-CM	Diagnosis
Major Extracranial Bleeding - List 2			
280.0	Iron deficiency anemia secondary to blood loss (chronic)	ICD-9-CM	Diagnosis
285.1	Acute posthemorrhagic anemia	ICD-9-CM	Diagnosis
285.9	Unspecified anemia	ICD-9-CM	Diagnosis
455.0	Internal hemorrhoids without mention of complication	ICD-9-CM	Diagnosis
455.1	Internal thrombosed hemorrhoids	ICD-9-CM	Diagnosis
455.2	Internal hemorrhoids with other complication	ICD-9-CM	Diagnosis
455.3	External hemorrhoids without mention of complication	ICD-9-CM	Diagnosis
455.4	External thrombosed hemorrhoids	ICD-9-CM	Diagnosis
455.5	External hemorrhoids with other complication	ICD-9-CM	Diagnosis
455.6	Unspecified hemorrhoids without mention of complication	ICD-9-CM	Diagnosis
455.7	Unspecified thrombosed hemorrhoids	ICD-9-CM	Diagnosis
455.8	Unspecified hemorrhoids with other complication	ICD-9-CM	Diagnosis
455.9	Residual hemorrhoidal skin tags	ICD-9-CM	Diagnosis
530.1	Esophagitis	ICD-9-CM	Diagnosis
531.1	Acute gastric ulcer with perforation	ICD-9-CM	Diagnosis
531.3	Acute gastric ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
531.5	Chronic or unspecified gastric ulcer with perforation	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
531.7	Chronic gastric ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
531.9	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
532.1	Acute duodenal ulcer with perforation	ICD-9-CM	Diagnosis
532.3	Acute duodenal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
532.5	Chronic or unspecified duodenal ulcer with perforation	ICD-9-CM	Diagnosis
532.7	Chronic duodenal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
532.9	Duodenal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
533.1	Acute peptic ulcer, unspecified site, with perforation	ICD-9-CM	Diagnosis
533.3	Acute peptic ulcer, unspecified site, without mention of hemorrhage and perforation	ICD-9-CM	Diagnosis
533.5	Chronic or unspecified peptic ulcer, unspecified site, with perforation	ICD-9-CM	Diagnosis
533.7	Chronic peptic ulcer, unspecified site, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
533.9	Peptic ulcer, unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
534.1	Acute gastrojejunal ulcer with perforation	ICD-9-CM	Diagnosis
534.3	Acute gastrojejunal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
534.5	Chronic or unspecified gastrojejunal ulcer with perforation	ICD-9-CM	Diagnosis
534.7	Chronic gastrojejunal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
534.9	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
535.00	Acute gastritis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.10	Atrophic gastritis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.20	Gastric mucosal hypertrophy without mention of hemorrhage	ICD-9-CM	Diagnosis
535.30	Alcoholic gastritis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.40	Other specified gastritis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.50	Unspecified gastritis and gastroduodenitis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.60	Duodenitis without mention of hemorrhage	ICD-9-CM	Diagnosis
562.00	Diverticulosis of small intestine (without mention of hemorrhage)	ICD-9-CM	Diagnosis
562.01	Diverticulitis of small intestine (without mention of hemorrhage)	ICD-9-CM	Diagnosis
562.10	Diverticulosis of colon (without mention of hemorrhage)	ICD-9-CM	Diagnosis
562.11	Diverticulitis of colon (without mention of hemorrhage)	ICD-9-CM	Diagnosis
790.92	Abnormal coagulation profile	ICD-9-CM	Diagnosis
D50.0	Iron deficiency anemia secondary to blood loss (chronic)	ICD-10-CM	Diagnosis
D62	Acute posthemorrhagic anemia	ICD-10-CM	Diagnosis
D64.9	Anemia, unspecified	ICD-10-CM	Diagnosis
K29.00	Acute gastritis without bleeding	ICD-10-CM	Diagnosis
K29.20	Alcoholic gastritis without bleeding	ICD-10-CM	Diagnosis
K29.30	Chronic superficial gastritis without bleeding	ICD-10-CM	Diagnosis
K29.40	Chronic atrophic gastritis without bleeding	ICD-10-CM	Diagnosis
K29.50	Unspecified chronic gastritis without bleeding	ICD-10-CM	Diagnosis
K29.60	Other gastritis without bleeding	ICD-10-CM	Diagnosis
K29.70	Gastritis, unspecified, without bleeding	ICD-10-CM	Diagnosis
K29.80	Duodenitis without bleeding	ICD-10-CM	Diagnosis
K29.90	Gastroduodenitis, unspecified, without bleeding	ICD-10-CM	Diagnosis
K57.00	Diverticulitis of small intestine with perforation and abscess without bleeding	ICD-10-CM	Diagnosis
K57.10	Diverticulosis of small intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.12	Diverticulitis of small intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.20	Diverticulitis of large intestine with perforation and abscess without bleeding	ICD-10-CM	Diagnosis
K57.30	Diverticulosis of large intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
K57.32	Diverticulitis of large intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.40	Diverticulitis of both small and large intestine with perforation and abscess without bleeding	ICD-10-CM	Diagnosis
K57.50	Diverticulosis of both small and large intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.52	Diverticulitis of both small and large intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.80	Diverticulitis of intestine, part unspecified, with perforation and abscess without bleeding	ICD-10-CM	Diagnosis
K57.90	Diverticulosis of intestine, part unspecified, without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.92	Diverticulitis of intestine, part unspecified, without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K64.0	First degree hemorrhoids	ICD-10-CM	Diagnosis
K64.1	Second degree hemorrhoids	ICD-10-CM	Diagnosis
K64.2	Third degree hemorrhoids	ICD-10-CM	Diagnosis
K64.3	Fourth degree hemorrhoids	ICD-10-CM	Diagnosis
K64.4	Residual hemorrhoidal skin tags	ICD-10-CM	Diagnosis
K64.5	Perianal venous thrombosis	ICD-10-CM	Diagnosis
K64.8	Other hemorrhoids	ICD-10-CM	Diagnosis
K64.9	Unspecified hemorrhoids	ICD-10-CM	Diagnosis
R79.1	Abnormal coagulation profile	ICD-10-CM	Diagnosis
Major Extracranial Bleeding - List 3			
62000	Elevation of depressed skull fracture; simple, extradural	CPT-4	Procedure
62005	Elevation of depressed skull fracture; compound or comminuted, extradural	CPT-4	Procedure
62010	Elevation of depressed skull fracture; with repair of dura and/or debridement of brain	CPT-4	Procedure
800	Fracture of vault of skull	ICD-9-CM	Diagnosis
800.0	Closed fracture of vault of skull without mention of intracranial injury	ICD-9-CM	Diagnosis
800.00	Closed fracture of vault of skull without mention of intracranial injury, unspecified state of consciousness	ICD-9-CM	Diagnosis
800.01	Closed fracture of vault of skull without mention of intracranial injury, no loss of consciousness	ICD-9-CM	Diagnosis
800.02	Closed fracture of vault of skull without mention of intracranial injury, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
800.03	Closed fracture of vault of skull without mention of intracranial injury, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
800.04	Closed fracture of vault of skull without mention of intracranial injury, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
800.05	Closed fracture of vault of skull without mention of intracranial injury, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
800.06	Closed fracture of vault of skull without mention of intracranial injury, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
800.09	Closed fracture of vault of skull without mention of intracranial injury, unspecified concussion	ICD-9-CM	Diagnosis
800.1	Closed fracture of vault of skull with cerebral laceration and contusion	ICD-9-CM	Diagnosis
800.10	Closed fracture of vault of skull with cerebral laceration and contusion, unspecified state of consciousness	ICD-9-CM	Diagnosis
800.11	Closed fracture of vault of skull with cerebral laceration and contusion, no loss of consciousness	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
800.12	Closed fracture of vault of skull with cerebral laceration and contusion, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
800.13	Closed fracture of vault of skull with cerebral laceration and contusion, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
800.14	Closed fracture of vault of skull with cerebral laceration and contusion, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
800.15	Closed fracture of vault of skull with cerebral laceration and contusion, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
800.16	Closed fracture of vault of skull with cerebral laceration and contusion, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
800.19	Closed fracture of vault of skull with cerebral laceration and contusion, unspecified concussion	ICD-9-CM	Diagnosis
800.2	Closed fracture of vault of skull with subarachnoid, subdural, and extradural hemorrhage	ICD-9-CM	Diagnosis
800.20	Closed fracture of vault of skull with subarachnoid, subdural, and extradural hemorrhage, unspecified state of consciousness	ICD-9-CM	Diagnosis
800.21	Closed fracture of vault of skull with subarachnoid, subdural, and extradural hemorrhage, no loss of consciousness	ICD-9-CM	Diagnosis
800.22	Closed fracture of vault of skull with subarachnoid, subdural, and extradural hemorrhage, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
800.23	Closed fracture of vault of skull with subarachnoid, subdural, and extradural hemorrhage, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
800.24	Closed fracture of vault of skull with subarachnoid, subdural, and extradural hemorrhage, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
800.25	Closed fracture of vault of skull with subarachnoid, subdural, and extradural hemorrhage, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
800.26	Closed fracture of vault of skull with subarachnoid, subdural, and extradural hemorrhage, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
800.29	Closed fracture of vault of skull with subarachnoid, subdural, and extradural hemorrhage, unspecified concussion	ICD-9-CM	Diagnosis
800.3	Closed fracture of vault of skull with other and unspecified intracranial hemorrhage	ICD-9-CM	Diagnosis
800.30	Closed fracture of vault of skull with other and unspecified intracranial hemorrhage, unspecified state of consciousness	ICD-9-CM	Diagnosis
800.31	Closed fracture of vault of skull with other and unspecified intracranial hemorrhage, no loss of consciousness	ICD-9-CM	Diagnosis
800.32	Closed fracture of vault of skull with other and unspecified intracranial hemorrhage, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
800.33	Closed fracture of vault of skull with other and unspecified intracranial hemorrhage, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
800.34	Closed fracture of vault of skull with other and unspecified intracranial hemorrhage, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
800.35	Closed fracture of vault of skull with other and unspecified intracranial hemorrhage, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
800.36	Closed fracture of vault of skull with other and unspecified intracranial hemorrhage, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
800.39	Closed fracture of vault of skull with other and unspecified intracranial hemorrhage, unspecified concussion	ICD-9-CM	Diagnosis
800.4	Closed fracture of vault of skull with intercranial injury of other and unspecified nature	ICD-9-CM	Diagnosis
800.40	Closed fracture of vault of skull with intracranial injury of other and unspecified nature, unspecified state of consciousness	ICD-9-CM	Diagnosis
800.41	Closed fracture of vault of skull with intracranial injury of other and unspecified nature, no loss of consciousness	ICD-9-CM	Diagnosis
800.42	Closed fracture of vault of skull with intracranial injury of other and unspecified nature, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
800.43	Closed fracture of vault of skull with intracranial injury of other and unspecified nature, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
800.44	Closed fracture of vault of skull with intracranial injury of other and unspecified nature, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
800.45	Closed fracture of vault of skull with intracranial injury of other and unspecified nature, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
800.46	Closed fracture of vault of skull with intracranial injury of other and unspecified nature, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
800.49	Closed fracture of vault of skull with intracranial injury of other and unspecified nature, unspecified concussion	ICD-9-CM	Diagnosis
800.5	Open fracture of vault of skull without mention of intracranial injury	ICD-9-CM	Diagnosis
800.50	Open fracture of vault of skull without mention of intracranial injury, unspecified state of consciousness	ICD-9-CM	Diagnosis
800.51	Open fracture of vault of skull without mention of intracranial injury, no loss of consciousness	ICD-9-CM	Diagnosis
800.52	Open fracture of vault of skull without mention of intracranial injury, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
800.53	Open fracture of vault of skull without mention of intracranial injury, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
800.54	Open fracture of vault of skull without mention of intracranial injury, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
800.55	Open fracture of vault of skull without mention of intracranial injury, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
800.56	Open fracture of vault of skull without mention of intracranial injury, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
800.59	Open fracture of vault of skull without mention of intracranial injury, unspecified concussion	ICD-9-CM	Diagnosis
800.6	Open fracture of vault of skull with cerebral laceration and contusion	ICD-9-CM	Diagnosis
800.60	Open fracture of vault of skull with cerebral laceration and contusion, unspecified state of consciousness	ICD-9-CM	Diagnosis
800.61	Open fracture of vault of skull with cerebral laceration and contusion, no loss of consciousness	ICD-9-CM	Diagnosis
800.62	Open fracture of vault of skull with cerebral laceration and contusion, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
800.63	Open fracture of vault of skull with cerebral laceration and contusion, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
800.64	Open fracture of vault of skull with cerebral laceration and contusion, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
800.65	Open fracture of vault of skull with cerebral laceration and contusion, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
800.66	Open fracture of vault of skull with cerebral laceration and contusion, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
800.69	Open fracture of vault of skull with cerebral laceration and contusion, unspecified concussion	ICD-9-CM	Diagnosis
800.7	Open fracture of vault of skull with subarachnoid, subdural, and extradural hemorrhage	ICD-9-CM	Diagnosis
800.70	Open fracture of vault of skull with subarachnoid, subdural, and extradural hemorrhage, unspecified state of consciousness	ICD-9-CM	Diagnosis
800.71	Open fracture of vault of skull with subarachnoid, subdural, and extradural hemorrhage, no loss of consciousness	ICD-9-CM	Diagnosis
800.72	Open fracture of vault of skull with subarachnoid, subdural, and extradural hemorrhage, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
800.73	Open fracture of vault of skull with subarachnoid, subdural, and extradural hemorrhage, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
800.74	Open fracture of vault of skull with subarachnoid, subdural, and extradural hemorrhage, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
800.75	Open fracture of vault of skull with subarachnoid, subdural, and extradural hemorrhage, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
800.76	Open fracture of vault of skull with subarachnoid, subdural, and extradural hemorrhage, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
800.79	Open fracture of vault of skull with subarachnoid, subdural, and extradural hemorrhage, unspecified concussion	ICD-9-CM	Diagnosis
800.8	Open fracture of vault of skull with other and unspecified intracranial hemorrhage	ICD-9-CM	Diagnosis
800.80	Open fracture of vault of skull with other and unspecified intracranial hemorrhage, unspecified state of consciousness	ICD-9-CM	Diagnosis
800.81	Open fracture of vault of skull with other and unspecified intracranial hemorrhage, no loss of consciousness	ICD-9-CM	Diagnosis
800.82	Open fracture of vault of skull with other and unspecified intracranial hemorrhage, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
800.83	Open fracture of vault of skull with other and unspecified intracranial hemorrhage, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
800.84	Open fracture of vault of skull with other and unspecified intracranial hemorrhage, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
800.85	Open fracture of vault of skull with other and unspecified intracranial hemorrhage, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
800.86	Open fracture of vault of skull with other and unspecified intracranial hemorrhage, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
800.89	Open fracture of vault of skull with other and unspecified intracranial hemorrhage, unspecified concussion	ICD-9-CM	Diagnosis
800.9	Open fracture of vault of skull with intracranial injury of other and unspecified nature	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
800.90	Open fracture of vault of skull with intracranial injury of other and unspecified nature, unspecified state of consciousness	ICD-9-CM	Diagnosis
800.91	Open fracture of vault of skull with intracranial injury of other and unspecified nature, no loss of consciousness	ICD-9-CM	Diagnosis
800.92	Open fracture of vault of skull with intracranial injury of other and unspecified nature, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
800.93	Open fracture of vault of skull with intracranial injury of other and unspecified nature, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
800.94	Open fracture of vault of skull with intracranial injury of other and unspecified nature, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
800.95	Open fracture of vault of skull with intracranial injury of other and unspecified nature, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
800.96	Open fracture of vault of skull with intracranial injury of other and unspecified nature, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
800.99	Open fracture of vault of skull with intracranial injury of other and unspecified nature, unspecified concussion	ICD-9-CM	Diagnosis
801	Fracture of base of skull	ICD-9-CM	Diagnosis
801.0	Closed fracture of base of skull without mention of intracranial injury	ICD-9-CM	Diagnosis
801.00	Closed fracture of base of skull without mention of intracranial injury, unspecified state of consciousness	ICD-9-CM	Diagnosis
801.01	Closed fracture of base of skull without mention of intracranial injury, no loss of consciousness	ICD-9-CM	Diagnosis
801.02	Closed fracture of base of skull without mention of intracranial injury, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
801.03	Closed fracture of base of skull without mention of intracranial injury, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
801.04	Closed fracture of base of skull without mention of intracranial injury, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
801.05	Closed fracture of base of skull without mention of intracranial injury, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
801.06	Closed fracture of base of skull without mention of intracranial injury, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
801.09	Closed fracture of base of skull without mention of intracranial injury, unspecified concussion	ICD-9-CM	Diagnosis
801.1	Closed fracture of base of skull with cerebral laceration and contusion	ICD-9-CM	Diagnosis
801.10	Closed fracture of base of skull with cerebral laceration and contusion, unspecified state of consciousness	ICD-9-CM	Diagnosis
801.11	Closed fracture of base of skull with cerebral laceration and contusion, no loss of consciousness	ICD-9-CM	Diagnosis
801.12	Closed fracture of base of skull with cerebral laceration and contusion, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
801.13	Closed fracture of base of skull with cerebral laceration and contusion, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
801.14	Closed fracture of base of skull with cerebral laceration and contusion, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
801.15	Closed fracture of base of skull with cerebral laceration and contusion, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
801.16	Closed fracture of base of skull with cerebral laceration and contusion, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
801.19	Closed fracture of base of skull with cerebral laceration and contusion, unspecified concussion	ICD-9-CM	Diagnosis
801.2	Closed fracture of base of skull with subarachnoid, subdural, and extradural hemorrhage	ICD-9-CM	Diagnosis
801.20	Closed fracture of base of skull with subarachnoid, subdural, and extradural hemorrhage, unspecified state of consciousness	ICD-9-CM	Diagnosis
801.21	Closed fracture of base of skull with subarachnoid, subdural, and extradural hemorrhage, no loss of consciousness	ICD-9-CM	Diagnosis
801.22	Closed fracture of base of skull with subarachnoid, subdural, and extradural hemorrhage, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
801.23	Closed fracture of base of skull with subarachnoid, subdural, and extradural hemorrhage, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
801.24	Closed fracture of base of skull with subarachnoid, subdural, and extradural hemorrhage, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
801.25	Closed fracture of base of skull with subarachnoid, subdural, and extradural hemorrhage, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
801.26	Closed fracture of base of skull with subarachnoid, subdural, and extradural hemorrhage, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
801.29	Closed fracture of base of skull with subarachnoid, subdural, and extradural hemorrhage, unspecified concussion	ICD-9-CM	Diagnosis
801.3	Closed fracture of base of skull with other and unspecified intracranial hemorrhage	ICD-9-CM	Diagnosis
801.30	Closed fracture of base of skull with other and unspecified intracranial hemorrhage, unspecified state of consciousness	ICD-9-CM	Diagnosis
801.31	Closed fracture of base of skull with other and unspecified intracranial hemorrhage, no loss of consciousness	ICD-9-CM	Diagnosis
801.32	Closed fracture of base of skull with other and unspecified intracranial hemorrhage, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
801.33	Closed fracture of base of skull with other and unspecified intracranial hemorrhage, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
801.34	Closed fracture of base of skull with other and unspecified intracranial hemorrhage, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
801.35	Closed fracture of base of skull with other and unspecified intracranial hemorrhage, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
801.36	Closed fracture of base of skull with other and unspecified intracranial hemorrhage, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
801.39	Closed fracture of base of skull with other and unspecified intracranial hemorrhage, unspecified concussion	ICD-9-CM	Diagnosis
801.4	Closed fracture of base of skull with intracranial injury of other and unspecified nature	ICD-9-CM	Diagnosis
801.40	Closed fracture of base of skull with intracranial injury of other and unspecified nature, unspecified state of consciousness	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
801.41	Closed fracture of base of skull with intracranial injury of other and unspecified nature, no loss of consciousness	ICD-9-CM	Diagnosis
801.42	Closed fracture of base of skull with intracranial injury of other and unspecified nature, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
801.43	Closed fracture of base of skull with intracranial injury of other and unspecified nature, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
801.44	Closed fracture of base of skull with intracranial injury of other and unspecified nature, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
801.45	Closed fracture of base of skull with intracranial injury of other and unspecified nature, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
801.46	Closed fracture of base of skull with intracranial injury of other and unspecified nature, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
801.49	Closed fracture of base of skull with intracranial injury of other and unspecified nature, unspecified concussion	ICD-9-CM	Diagnosis
801.5	Open fracture of base of skull without mention of intracranial injury	ICD-9-CM	Diagnosis
801.50	Open fracture of base of skull without mention of intracranial injury, unspecified state of consciousness	ICD-9-CM	Diagnosis
801.51	Open fracture of base of skull without mention of intracranial injury, no loss of consciousness	ICD-9-CM	Diagnosis
801.52	Open fracture of base of skull without mention of intracranial injury, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
801.53	Open fracture of base of skull without mention of intracranial injury, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
801.54	Open fracture of base of skull without mention of intracranial injury, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
801.55	Open fracture of base of skull without mention of intracranial injury, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
801.56	Open fracture of base of skull without mention of intracranial injury, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
801.59	Open fracture of base of skull without mention of intracranial injury, unspecified concussion	ICD-9-CM	Diagnosis
801.6	Open fracture of base of skull with cerebral laceration and contusion	ICD-9-CM	Diagnosis
801.60	Open fracture of base of skull with cerebral laceration and contusion, unspecified state of consciousness	ICD-9-CM	Diagnosis
801.61	Open fracture of base of skull with cerebral laceration and contusion, no loss of consciousness	ICD-9-CM	Diagnosis
801.62	Open fracture of base of skull with cerebral laceration and contusion, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
801.63	Open fracture of base of skull with cerebral laceration and contusion, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
801.64	Open fracture of base of skull with cerebral laceration and contusion, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
801.65	Open fracture of base of skull with cerebral laceration and contusion, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
801.66	Open fracture of base of skull with cerebral laceration and contusion, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
801.69	Open fracture of base of skull with cerebral laceration and contusion, unspecified concussion	ICD-9-CM	Diagnosis
801.7	Open fracture of base of skull with subarachnoid, subdural, and extradural hemorrhage	ICD-9-CM	Diagnosis
801.70	Open fracture of base of skull with subarachnoid, subdural, and extradural hemorrhage, unspecified state of consciousness	ICD-9-CM	Diagnosis
801.71	Open fracture of base of skull with subarachnoid, subdural, and extradural hemorrhage, no loss of consciousness	ICD-9-CM	Diagnosis
801.72	Open fracture of base of skull with subarachnoid, subdural, and extradural hemorrhage, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
801.73	Open fracture of base of skull with subarachnoid, subdural, and extradural hemorrhage, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
801.74	Open fracture of base of skull with subarachnoid, subdural, and extradural hemorrhage, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
801.75	Open fracture of base of skull with subarachnoid, subdural, and extradural hemorrhage, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
801.76	Open fracture of base of skull with subarachnoid, subdural, and extradural hemorrhage, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
801.79	Open fracture of base of skull with subarachnoid, subdural, and extradural hemorrhage, unspecified concussion	ICD-9-CM	Diagnosis
801.8	Open fracture of base of skull with other and unspecified intracranial hemorrhage	ICD-9-CM	Diagnosis
801.80	Open fracture of base of skull with other and unspecified intracranial hemorrhage, unspecified state of consciousness	ICD-9-CM	Diagnosis
801.81	Open fracture of base of skull with other and unspecified intracranial hemorrhage, no loss of consciousness	ICD-9-CM	Diagnosis
801.82	Open fracture of base of skull with other and unspecified intracranial hemorrhage, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
801.83	Open fracture of base of skull with other and unspecified intracranial hemorrhage, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
801.84	Open fracture of base of skull with other and unspecified intracranial hemorrhage, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
801.85	Open fracture of base of skull with other and unspecified intracranial hemorrhage, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
801.86	Open fracture of base of skull with other and unspecified intracranial hemorrhage, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
801.89	Open fracture of base of skull with other and unspecified intracranial hemorrhage, unspecified concussion	ICD-9-CM	Diagnosis
801.9	Open fracture of base of skull with intracranial injury of other and unspecified nature	ICD-9-CM	Diagnosis
801.90	Open fracture of base of skull with intracranial injury of other and unspecified nature, unspecified state of consciousness	ICD-9-CM	Diagnosis
801.91	Open fracture of base of skull with intracranial injury of other and unspecified nature, no loss of consciousness	ICD-9-CM	Diagnosis
801.92	Open fracture of base of skull with intracranial injury of other and unspecified nature, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
801.93	Open fracture of base of skull with intracranial injury of other and unspecified nature, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
801.94	Open fracture of base of skull with intracranial injury of other and unspecified nature, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
801.95	Open fracture of base of skull with intracranial injury of other and unspecified nature, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
801.96	Open fracture of base of skull with intracranial injury of other and unspecified nature, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
801.99	Open fracture of base of skull with intracranial injury of other and unspecified nature, unspecified concussion	ICD-9-CM	Diagnosis
802	Fracture of face bones	ICD-9-CM	Diagnosis
802.0	Nasal bones, closed fracture	ICD-9-CM	Diagnosis
802.1	Nasal bones, open fracture	ICD-9-CM	Diagnosis
802.2	Mandible, closed fracture	ICD-9-CM	Diagnosis
802.20	Closed fracture of unspecified site of mandible	ICD-9-CM	Diagnosis
802.21	Closed fracture of condylar process of mandible	ICD-9-CM	Diagnosis
802.22	Closed fracture of subcondylar process of mandible	ICD-9-CM	Diagnosis
802.23	Closed fracture of coronoid process of mandible	ICD-9-CM	Diagnosis
802.24	Closed fracture of unspecified part of ramus of mandible	ICD-9-CM	Diagnosis
802.25	Closed fracture of angle of jaw	ICD-9-CM	Diagnosis
802.26	Closed fracture of symphysis of body of mandible	ICD-9-CM	Diagnosis
802.27	Closed fracture of alveolar border of body of mandible	ICD-9-CM	Diagnosis
802.28	Closed fracture of other and unspecified part of body of mandible	ICD-9-CM	Diagnosis
802.29	Closed fracture of multiple sites of mandible	ICD-9-CM	Diagnosis
802.3	Mandible, open fracture	ICD-9-CM	Diagnosis
802.30	Open fracture of unspecified site of mandible	ICD-9-CM	Diagnosis
802.31	Open fracture of condylar process of mandible	ICD-9-CM	Diagnosis
802.32	Open fracture of subcondylar process of mandible	ICD-9-CM	Diagnosis
802.33	Open fracture of coronoid process of mandible	ICD-9-CM	Diagnosis
802.34	Open fracture of unspecified part of ramus of mandible	ICD-9-CM	Diagnosis
802.35	Open fracture of angle of jaw	ICD-9-CM	Diagnosis
802.36	Open fracture of symphysis of body of mandible	ICD-9-CM	Diagnosis
802.37	Open fracture of alveolar border of body of mandible	ICD-9-CM	Diagnosis
802.38	Open fracture of other and unspecified part of body of mandible	ICD-9-CM	Diagnosis
802.39	Open fracture of multiple sites of mandible	ICD-9-CM	Diagnosis
802.4	Malar and maxillary bones, closed fracture	ICD-9-CM	Diagnosis
802.5	Malar and maxillary bones, open fracture	ICD-9-CM	Diagnosis
802.6	Orbital floor (blow-out), closed fracture	ICD-9-CM	Diagnosis
802.7	Orbital floor (blow-out), open fracture	ICD-9-CM	Diagnosis
802.8	Other facial bones, closed fracture	ICD-9-CM	Diagnosis
802.9	Other facial bones, open fracture	ICD-9-CM	Diagnosis
803	Other and unqualified skull fractures	ICD-9-CM	Diagnosis
803.0	Other closed skull fracture without mention of intracranial injury	ICD-9-CM	Diagnosis
803.00	Other closed skull fracture without mention of intracranial injury, unspecified state of consciousness	ICD-9-CM	Diagnosis
803.01	Other closed skull fracture without mention of intracranial injury, no loss of consciousness	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
803.02	Other closed skull fracture without mention of intracranial injury, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
803.03	Other closed skull fracture without mention of intracranial injury, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
803.04	Other closed skull fracture without mention of intracranial injury, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
803.05	Other closed skull fracture without mention of intracranial injury, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
803.06	Other closed skull fracture without mention of intracranial injury, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
803.09	Other closed skull fracture without mention of intracranial injury, unspecified concussion	ICD-9-CM	Diagnosis
803.1	Other closed skull fracture with cerebral laceration and contusion	ICD-9-CM	Diagnosis
803.10	Other closed skull fracture with cerebral laceration and contusion, unspecified state of consciousness	ICD-9-CM	Diagnosis
803.11	Other closed skull fracture with cerebral laceration and contusion, no loss of consciousness	ICD-9-CM	Diagnosis
803.12	Other closed skull fracture with cerebral laceration and contusion, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
803.13	Other closed skull fracture with cerebral laceration and contusion, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
803.14	Other closed skull fracture with cerebral laceration and contusion, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
803.15	Other closed skull fracture with cerebral laceration and contusion, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
803.16	Other closed skull fracture with cerebral laceration and contusion, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
803.19	Other closed skull fracture with cerebral laceration and contusion, unspecified concussion	ICD-9-CM	Diagnosis
803.2	Other closed skull fracture with subarachnoid, subdural, and extradural hemorrhage	ICD-9-CM	Diagnosis
803.20	Other closed skull fracture with subarachnoid, subdural, and extradural hemorrhage, unspecified state of consciousness	ICD-9-CM	Diagnosis
803.21	Other closed skull fracture with subarachnoid, subdural, and extradural hemorrhage, no loss of consciousness	ICD-9-CM	Diagnosis
803.22	Other closed skull fracture with subarachnoid, subdural, and extradural hemorrhage, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
803.23	Other closed skull fracture with subarachnoid, subdural, and extradural hemorrhage, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
803.24	Other closed skull fracture with subarachnoid, subdural, and extradural hemorrhage, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
803.25	Other closed skull fracture with subarachnoid, subdural, and extradural hemorrhage, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
803.26	Other closed skull fracture with subarachnoid, subdural, and extradural hemorrhage, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
803.29	Other closed skull fracture with subarachnoid, subdural, and extradural hemorrhage, unspecified concussion	ICD-9-CM	Diagnosis
803.3	Closed skull fracture with other and unspecified intracranial hemorrhage	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
803.30	Other closed skull fracture with other and unspecified intracranial hemorrhage, unspecified state of unconsciousness	ICD-9-CM	Diagnosis
803.31	Other closed skull fracture with other and unspecified intracranial hemorrhage, no loss of consciousness	ICD-9-CM	Diagnosis
803.32	Other closed skull fracture with other and unspecified intracranial hemorrhage, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
803.33	Other closed skull fracture with other and unspecified intracranial hemorrhage, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
803.34	Other closed skull fracture with other and unspecified intracranial hemorrhage, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
803.35	Other closed skull fracture with other and unspecified intracranial hemorrhage, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
803.36	Other closed skull fracture with other and unspecified intracranial hemorrhage, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
803.39	Other closed skull fracture with other and unspecified intracranial hemorrhage, unspecified concussion	ICD-9-CM	Diagnosis
803.4	Other closed skull fracture with intracranial injury of other and unspecified nature	ICD-9-CM	Diagnosis
803.40	Other closed skull fracture with intracranial injury of other and unspecified nature, unspecified state of consciousness	ICD-9-CM	Diagnosis
803.41	Other closed skull fracture with intracranial injury of other and unspecified nature, no loss of consciousness	ICD-9-CM	Diagnosis
803.42	Other closed skull fracture with intracranial injury of other and unspecified nature, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
803.43	Other closed skull fracture with intracranial injury of other and unspecified nature, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
803.44	Other closed skull fracture with intracranial injury of other and unspecified nature, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
803.45	Other closed skull fracture with intracranial injury of other and unspecified nature, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
803.46	Other closed skull fracture with intracranial injury of other and unspecified nature, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
803.49	Other closed skull fracture with intracranial injury of other and unspecified nature, unspecified concussion	ICD-9-CM	Diagnosis
803.5	Other open skull fracture without mention of intracranial injury	ICD-9-CM	Diagnosis
803.50	Other open skull fracture without mention of injury, state of consciousness unspecified	ICD-9-CM	Diagnosis
803.51	Other open skull fracture without mention of intracranial injury, no loss of consciousness	ICD-9-CM	Diagnosis
803.52	Other open skull fracture without mention of intracranial injury, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
803.53	Other open skull fracture without mention of intracranial injury, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
803.54	Other open skull fracture without mention of intracranial injury, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
803.55	Other open skull fracture without mention of intracranial injury, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
803.56	Other open skull fracture without mention of intracranial injury, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
803.59	Other open skull fracture without mention of intracranial injury, unspecified concussion	ICD-9-CM	Diagnosis
803.6	Other open skull fracture with cerebral laceration and contusion	ICD-9-CM	Diagnosis
803.60	Other open skull fracture with cerebral laceration and contusion, unspecified state of consciousness	ICD-9-CM	Diagnosis
803.61	Other open skull fracture with cerebral laceration and contusion, no loss of consciousness	ICD-9-CM	Diagnosis
803.62	Other open skull fracture with cerebral laceration and contusion, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
803.63	Other open skull fracture with cerebral laceration and contusion, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
803.64	Other open skull fracture with cerebral laceration and contusion, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
803.65	Other open skull fracture with cerebral laceration and contusion, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
803.66	Other open skull fracture with cerebral laceration and contusion, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
803.69	Other open skull fracture with cerebral laceration and contusion, unspecified concussion	ICD-9-CM	Diagnosis
803.7	Other open skull fracture with subarachnoid, subdural, and extradural hemorrhage	ICD-9-CM	Diagnosis
803.70	Other open skull fracture with subarachnoid, subdural, and extradural hemorrhage, unspecified state of consciousness	ICD-9-CM	Diagnosis
803.71	Other open skull fracture with subarachnoid, subdural, and extradural hemorrhage, no loss of consciousness	ICD-9-CM	Diagnosis
803.72	Other open skull fracture with subarachnoid, subdural, and extradural hemorrhage, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
803.73	Other open skull fracture with subarachnoid, subdural, and extradural hemorrhage, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
803.74	Other open skull fracture with subarachnoid, subdural, and extradural hemorrhage, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
803.75	Other open skull fracture with subarachnoid, subdural, and extradural hemorrhage, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
803.76	Other open skull fracture with subarachnoid, subdural, and extradural hemorrhage, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
803.79	Other open skull fracture with subarachnoid, subdural, and extradural hemorrhage, unspecified concussion	ICD-9-CM	Diagnosis
803.8	Other open skull fracture with other and unspecified intracranial hemorrhage	ICD-9-CM	Diagnosis
803.80	Other open skull fracture with other and unspecified intracranial hemorrhage, unspecified state of consciousness	ICD-9-CM	Diagnosis
803.81	Other open skull fracture with other and unspecified intracranial hemorrhage, no loss of consciousness	ICD-9-CM	Diagnosis
803.82	Other open skull fracture with other and unspecified intracranial hemorrhage, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
803.83	Other open skull fracture with other and unspecified intracranial hemorrhage, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
803.84	Other open skull fracture with other and unspecified intracranial hemorrhage, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
803.85	Other open skull fracture with other and unspecified intracranial hemorrhage, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
803.86	Other open skull fracture with other and unspecified intracranial hemorrhage, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
803.89	Other open skull fracture with other and unspecified intracranial hemorrhage, unspecified concussion	ICD-9-CM	Diagnosis
803.9	Other open skull fracture with intracranial injury of other and unspecified nature	ICD-9-CM	Diagnosis
803.90	Other open skull fracture with intracranial injury of other and unspecified nature, unspecified state of consciousness	ICD-9-CM	Diagnosis
803.91	Other open skull fracture with intracranial injury of other and unspecified nature, no loss of consciousness	ICD-9-CM	Diagnosis
803.92	Other open skull fracture with intracranial injury of other and unspecified nature, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
803.93	Other open skull fracture with intracranial injury of other and unspecified nature, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
803.94	Other open skull fracture with intracranial injury of other and unspecified nature, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
803.95	Other open skull fracture with intracranial injury of other and unspecified nature, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
803.96	Other open skull fracture with intracranial injury of other and unspecified nature, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
803.99	Other open skull fracture with intracranial injury of other and unspecified nature, unspecified concussion	ICD-9-CM	Diagnosis
804	Multiple fractures involving skull or face with other bones	ICD-9-CM	Diagnosis
804.0	Closed fractures involving skull or face with other bones, without mention of intracranial injury	ICD-9-CM	Diagnosis
804.00	Closed fractures involving skull or face with other bones, without mention of intracranial injury, unspecified state of consciousness	ICD-9-CM	Diagnosis
804.01	Closed fractures involving skull or face with other bones, without mention of intracranial injury, no loss of consciousness	ICD-9-CM	Diagnosis
804.02	Closed fractures involving skull or face with other bones, without mention of intracranial injury, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
804.03	Closed fractures involving skull or face with other bones, without mention of intracranial injury, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
804.04	Closed fractures involving skull or face with other bones, without mention or intracranial injury, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
804.05	Closed fractures involving skull of face with other bones, without mention of intracranial injury, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
804.06	Closed fractures involving skull of face with other bones, without mention of intracranial injury, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
804.09	Closed fractures involving skull of face with other bones, without mention of intracranial injury, unspecified concussion	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
804.1	Closed fractures involving skull or face with other bones, with cerebral laceration and contusion	ICD-9-CM	Diagnosis
804.10	Closed fractures involving skull or face with other bones, with cerebral laceration and contusion, unspecified state of consciousness	ICD-9-CM	Diagnosis
804.11	Closed fractures involving skull or face with other bones, with cerebral laceration and contusion, no loss of consciousness	ICD-9-CM	Diagnosis
804.12	Closed fractures involving skull or face with other bones, with cerebral laceration and contusion, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
804.13	Closed fractures involving skull or face with other bones, with cerebral laceration and contusion, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
804.14	Closed fractures involving skull or face with other bones, with cerebral laceration and contusion, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
804.15	Closed fractures involving skull or face with other bones, with cerebral laceration and contusion, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
804.16	Closed fractures involving skull or face with other bones, with cerebral laceration and contusion, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
804.19	Closed fractures involving skull or face with other bones, with cerebral laceration and contusion, unspecified concussion	ICD-9-CM	Diagnosis
804.2	Closed fractures involving skull or face with other bones with subarachnoid, subdural, and extradural hemorrhage	ICD-9-CM	Diagnosis
804.20	Closed fractures involving skull or face with other bones with subarachnoid, subdural, and extradural hemorrhage, unspecified state of consciousness	ICD-9-CM	Diagnosis
804.21	Closed fractures involving skull or face with other bones with subarachnoid, subdural, and extradural hemorrhage, no loss of consciousness	ICD-9-CM	Diagnosis
804.22	Closed fractures involving skull or face with other bones with subarachnoid, subdural, and extradural hemorrhage, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
804.23	Closed fractures involving skull or face with other bones with subarachnoid, subdural, and extradural hemorrhage, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
804.24	Closed fractures involving skull or face with other bones with subarachnoid, subdural, and extradural hemorrhage, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
804.25	Closed fractures involving skull or face with other bones with subarachnoid, subdural, and extradural hemorrhage, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
804.26	Closed fractures involving skull or face with other bones with subarachnoid, subdural, and extradural hemorrhage, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
804.29	Closed fractures involving skull or face with other bones with subarachnoid, subdural, and extradural hemorrhage, unspecified concussion	ICD-9-CM	Diagnosis
804.3	Closed fractures involving skull or face with other bones, with other and unspecified intracranial hemorrhage	ICD-9-CM	Diagnosis
804.30	Closed fractures involving skull or face with other bones, with other and unspecified intracranial hemorrhage, unspecified state of consciousness	ICD-9-CM	Diagnosis
804.31	Closed fractures involving skull or face with other bones, with other and unspecified intracranial hemorrhage, no loss of consciousness	ICD-9-CM	Diagnosis
804.32	Closed fractures involving skull or face with other bones, with other and unspecified intracranial hemorrhage, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
804.33	Closed fractures involving skull or face with other bones, with other and unspecified intracranial hemorrhage, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
804.34	Closed fractures involving skull or face with other bones, with other and unspecified intracranial hemorrhage, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
804.35	Closed fractures involving skull or face with other bones, with other and unspecified intracranial hemorrhage, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
804.36	Closed fractures involving skull or face with other bones, with other and unspecified intracranial hemorrhage, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
804.39	Closed fractures involving skull or face with other bones, with other and unspecified intracranial hemorrhage, unspecified concussion	ICD-9-CM	Diagnosis
804.4	Closed fractures involving skull or face with other bones, with intracranial injury of other and unspecified nature	ICD-9-CM	Diagnosis
804.40	Closed fractures involving skull or face with other bones, with intracranial injury of other and unspecified nature, unspecified state of consciousness	ICD-9-CM	Diagnosis
804.41	Closed fractures involving skull or face with other bones, with intracranial injury of other and unspecified nature, no loss of consciousness	ICD-9-CM	Diagnosis
804.42	Closed fractures involving skull or face with other bones, with intracranial injury of other and unspecified nature, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
804.43	Closed fractures involving skull or face with other bones, with intracranial injury of other and unspecified nature, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
804.44	Closed fractures involving skull or face with other bones, with intracranial injury of other and unspecified nature, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
804.45	Closed fractures involving skull or face with other bones, with intracranial injury of other and unspecified nature, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
804.46	Closed fractures involving skull or face with other bones, with intracranial injury of other and unspecified nature, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
804.49	Closed fractures involving skull or face with other bones, with intracranial injury of other and unspecified nature, unspecified concussion	ICD-9-CM	Diagnosis
804.5	Open fractures involving skull or face with other bones, without mention of intracranial injury	ICD-9-CM	Diagnosis
804.50	Open fractures involving skull or face with other bones, without mention of intracranial injury, unspecified state of consciousness	ICD-9-CM	Diagnosis
804.51	Open fractures involving skull or face with other bones, without mention of intracranial injury, no loss of consciousness	ICD-9-CM	Diagnosis
804.52	Open fractures involving skull or face with other bones, without mention of intracranial injury, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
804.53	Open fractures involving skull or face with other bones, without mention of intracranial injury, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
804.54	Open fractures involving skull or face with other bones, without mention of intracranial injury, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
804.55	Open fractures involving skull or face with other bones, without mention of intracranial injury, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
804.56	Open fractures involving skull or face with other bones, without mention of intracranial injury, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
804.59	Open fractures involving skull or face with other bones, without mention of intracranial injury, unspecified concussion	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
804.6	Open fractures involving skull or face with other bones, with cerebral laceration and contusion	ICD-9-CM	Diagnosis
804.60	Open fractures involving skull or face with other bones, with cerebral laceration and contusion, unspecified state of consciousness	ICD-9-CM	Diagnosis
804.61	Open fractures involving skull or face with other bones, with cerebral laceration and contusion, no loss of consciousness	ICD-9-CM	Diagnosis
804.62	Open fractures involving skull or face with other bones, with cerebral laceration and contusion, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
804.63	Open fractures involving skull or face with other bones, with cerebral laceration and contusion, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
804.64	Open fractures involving skull or face with other bones, with cerebral laceration and contusion, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
804.65	Open fractures involving skull or face with other bones, with cerebral laceration and contusion, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
804.66	Open fractures involving skull or face with other bones, with cerebral laceration and contusion, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
804.69	Open fractures involving skull or face with other bones, with cerebral laceration and contusion, unspecified concussion	ICD-9-CM	Diagnosis
804.7	Open fractures involving skull or face with other bones with subarachnoid, subdural, and extradural hemorrhage	ICD-9-CM	Diagnosis
804.70	Open fractures involving skull or face with other bones with subarachnoid, subdural, and extradural hemorrhage, unspecified state of consciousness	ICD-9-CM	Diagnosis
804.71	Open fractures involving skull or face with other bones with subarachnoid, subdural, and extradural hemorrhage, no loss of consciousness	ICD-9-CM	Diagnosis
804.72	Open fractures involving skull or face with other bones with subarachnoid, subdural, and extradural hemorrhage, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
804.73	Open fractures involving skull or face with other bones with subarachnoid, subdural, and extradural hemorrhage, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
804.74	Open fractures involving skull or face with other bones with subarachnoid, subdural, and extradural hemorrhage, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
804.75	Open fractures involving skull or face with other bones with subarachnoid, subdural, and extradural hemorrhage, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
804.76	Open fractures involving skull or face with other bones with subarachnoid, subdural, and extradural hemorrhage, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
804.79	Open fractures involving skull or face with other bones with subarachnoid, subdural, and extradural hemorrhage, unspecified concussion	ICD-9-CM	Diagnosis
804.8	Open fractures involving skull or face with other bones, with other and unspecified intracranial hemorrhage	ICD-9-CM	Diagnosis
804.80	Open fractures involving skull or face with other bones, with other and unspecified intracranial hemorrhage, unspecified state of consciousness	ICD-9-CM	Diagnosis
804.81	Open fractures involving skull or face with other bones, with other and unspecified intracranial hemorrhage, no loss of consciousness	ICD-9-CM	Diagnosis
804.82	Open fractures involving skull or face with other bones, with other and unspecified intracranial hemorrhage, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
804.83	Open fractures involving skull or face with other bones, with other and unspecified intracranial hemorrhage, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
804.84	Open fractures involving skull or face with other bones, with other and unspecified intracranial hemorrhage, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
804.85	Open fractures involving skull or face with other bones, with other and unspecified intracranial hemorrhage, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
804.86	Open fractures involving skull or face with other bones, with other and unspecified intracranial hemorrhage, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
804.89	Open fractures involving skull or face with other bones, with other and unspecified intracranial hemorrhage, unspecified concussion	ICD-9-CM	Diagnosis
804.9	Open fractures involving skull or face with other bones, with intracranial injury of other and unspecified nature	ICD-9-CM	Diagnosis
804.90	Open fractures involving skull or face with other bones, with intracranial injury of other and unspecified nature, unspecified state of consciousness	ICD-9-CM	Diagnosis
804.91	Open fractures involving skull or face with other bones, with intracranial injury of other and unspecified nature, no loss of consciousness	ICD-9-CM	Diagnosis
804.92	Open fractures involving skull or face with other bones, with intracranial injury of other and unspecified nature, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
804.93	Open fractures involving skull or face with other bones, with intracranial injury of other and unspecified nature, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
804.94	Open fractures involving skull or face with other bones, with intracranial injury of other and unspecified nature, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
804.95	Open fractures involving skull or face with other bones, with intracranial injury of other and unspecified nature, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing level	ICD-9-CM	Diagnosis
804.96	Open fractures involving skull or face with other bones, with intracranial injury of other and unspecified nature, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
804.99	Open fractures involving skull or face with other bones, with intracranial injury of other and unspecified nature, unspecified concussion	ICD-9-CM	Diagnosis
805	Fracture of vertebral column without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.0	Closed fracture of cervical vertebra without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.00	Closed fracture of cervical vertebra, unspecified level without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.01	Closed fracture of first cervical vertebra without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.02	Closed fracture of second cervical vertebra without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.03	Closed fracture of third cervical vertebra without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.04	Closed fracture of fourth cervical vertebra without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.05	Closed fracture of fifth cervical vertebra without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.06	Closed fracture of sixth cervical vertebra without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.07	Closed fracture of seventh cervical vertebra without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.08	Closed fracture of multiple cervical vertebrae without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.1	Open fracture of cervical vertebra without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.10	Open fracture of cervical vertebra, unspecified level without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.11	Open fracture of first cervical vertebra without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.12	Open fracture of second cervical vertebra without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.13	Open fracture of third cervical vertebra without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.14	Open fracture of fourth cervical vertebra without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.15	Open fracture of fifth cervical vertebra without mention of spinal cord injury	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
805.16	Open fracture of sixth cervical vertebra without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.17	Open fracture of seventh cervical vertebra without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.18	Open fracture of multiple cervical vertebrae without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.2	Closed fracture of dorsal (thoracic) vertebra without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.3	Open fracture of dorsal (thoracic) vertebra without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.4	Closed fracture of lumbar vertebra without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.5	Open fracture of lumbar vertebra without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.6	Closed fracture of sacrum and coccyx without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.7	Open fracture of sacrum and coccyx without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.8	Closed fracture of unspecified part of vertebral column without mention of spinal cord injury	ICD-9-CM	Diagnosis
805.9	Open fracture of unspecified part of vertebral column without mention of spinal cord injury	ICD-9-CM	Diagnosis
806	Fracture of vertebral column with spinal cord injury	ICD-9-CM	Diagnosis
806.0	Closed fracture of cervical vertebra with spinal cord injury	ICD-9-CM	Diagnosis
806.00	Closed fracture of C1-C4 level with unspecified spinal cord injury	ICD-9-CM	Diagnosis
806.01	Closed fracture of C1-C4 level with complete lesion of cord	ICD-9-CM	Diagnosis
806.02	Closed fracture of C1-C4 level with anterior cord syndrome	ICD-9-CM	Diagnosis
806.03	Closed fracture of C1-C4 level with central cord syndrome	ICD-9-CM	Diagnosis
806.04	Closed fracture of C1-C4 level with other specified spinal cord injury	ICD-9-CM	Diagnosis
806.05	Closed fracture of C5-C7 level with unspecified spinal cord injury	ICD-9-CM	Diagnosis
806.06	Closed fracture of C5-C7 level with complete lesion of cord	ICD-9-CM	Diagnosis
806.07	Closed fracture of C5-C7 level with anterior cord syndrome	ICD-9-CM	Diagnosis
806.08	Closed fracture of C5-C7 level with central cord syndrome	ICD-9-CM	Diagnosis
806.09	Closed fracture of C5-C7 level with other specified spinal cord injury	ICD-9-CM	Diagnosis
806.1	Open fracture of cervical vertebra with spinal cord injury	ICD-9-CM	Diagnosis
806.10	Open fracture of C1-C4 level with unspecified spinal cord injury	ICD-9-CM	Diagnosis
806.11	Open fracture of C1-C4 level with complete lesion of cord	ICD-9-CM	Diagnosis
806.12	Open fracture of C1-C4 level with anterior cord syndrome	ICD-9-CM	Diagnosis
806.13	Open fracture of C1-C4 level with central cord syndrome	ICD-9-CM	Diagnosis
806.14	Open fracture of C1-C4 level with other specified spinal cord injury	ICD-9-CM	Diagnosis
806.15	Open fracture of C5-C7 level with unspecified spinal cord injury	ICD-9-CM	Diagnosis
806.16	Open fracture of C5-C7 level with complete lesion of cord	ICD-9-CM	Diagnosis
806.17	Open fracture of C5-C7 level with anterior cord syndrome	ICD-9-CM	Diagnosis
806.18	Open fracture of C5-C7 level with central cord syndrome	ICD-9-CM	Diagnosis
806.19	Open fracture of C5-C7 level with other specified spinal cord injury	ICD-9-CM	Diagnosis
806.2	Closed fracture of dorsal (thoracic) vertebra with spinal cord injury	ICD-9-CM	Diagnosis
806.20	Closed fracture of T1-T6 level with unspecified spinal cord injury	ICD-9-CM	Diagnosis
806.21	Closed fracture of T1-T6 level with complete lesion of cord	ICD-9-CM	Diagnosis
806.22	Closed fracture of T1-T6 level with anterior cord syndrome	ICD-9-CM	Diagnosis
806.23	Closed fracture of T1-T6 level with central cord syndrome	ICD-9-CM	Diagnosis
806.24	Closed fracture of T1-T6 level with other specified spinal cord injury	ICD-9-CM	Diagnosis
806.25	Closed fracture of T7-T12 level with unspecified spinal cord injury	ICD-9-CM	Diagnosis
806.26	Closed fracture of T7-T12 level with complete lesion of cord	ICD-9-CM	Diagnosis
806.27	Closed fracture of T7-T12 level with anterior cord syndrome	ICD-9-CM	Diagnosis
806.28	Closed fracture of T7-T12 level with central cord syndrome	ICD-9-CM	Diagnosis
806.29	Closed fracture of T7-T12 level with other specified spinal cord injury	ICD-9-CM	Diagnosis
806.3	Open fracture of dorsal vertebra with spinal cord injury	ICD-9-CM	Diagnosis
806.30	Open fracture of T1-T6 level with unspecified spinal cord injury	ICD-9-CM	Diagnosis
806.31	Open fracture of T1-T6 level with complete lesion of cord	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
806.32	Open fracture of T1-T6 level with anterior cord syndrome	ICD-9-CM	Diagnosis
806.33	Open fracture of T1-T6 level with central cord syndrome	ICD-9-CM	Diagnosis
806.34	Open fracture of T1-T6 level with other specified spinal cord injury	ICD-9-CM	Diagnosis
806.35	Open fracture of T7-T12 level with unspecified spinal cord injury	ICD-9-CM	Diagnosis
806.36	Open fracture of T7-T12 level with complete lesion of cord	ICD-9-CM	Diagnosis
806.37	Open fracture of T7-T12 level with anterior cord syndrome	ICD-9-CM	Diagnosis
806.38	Open fracture of T7-T12 level with central cord syndrome	ICD-9-CM	Diagnosis
806.39	Open fracture of T7-T12 level with other specified spinal cord injury	ICD-9-CM	Diagnosis
806.4	Closed fracture of lumbar spine with spinal cord injury	ICD-9-CM	Diagnosis
806.5	Open fracture of lumbar spine with spinal cord injury	ICD-9-CM	Diagnosis
806.6	Closed fracture of sacrum and coccyx with spinal cord injury	ICD-9-CM	Diagnosis
806.60	Closed fracture of sacrum and coccyx with unspecified spinal cord injury	ICD-9-CM	Diagnosis
806.61	Closed fracture of sacrum and coccyx with complete cauda equina lesion	ICD-9-CM	Diagnosis
806.62	Closed fracture of sacrum and coccyx with other cauda equina injury	ICD-9-CM	Diagnosis
806.69	Closed fracture of sacrum and coccyx with other spinal cord injury	ICD-9-CM	Diagnosis
806.7	Open fracture of sacrum and coccyx with spinal cord injury	ICD-9-CM	Diagnosis
806.70	Open fracture of sacrum and coccyx with unspecified spinal cord injury	ICD-9-CM	Diagnosis
806.71	Open fracture of sacrum and coccyx with complete cauda equina lesion	ICD-9-CM	Diagnosis
806.72	Open fracture of sacrum and coccyx with other cauda equina injury	ICD-9-CM	Diagnosis
806.79	Open fracture of sacrum and coccyx with other spinal cord injury	ICD-9-CM	Diagnosis
806.8	Closed fracture of unspecified vertebra with spinal cord injury	ICD-9-CM	Diagnosis
806.9	Open fracture of unspecified vertebra with spinal cord injury	ICD-9-CM	Diagnosis
807	Fracture of rib(s), sternum, larynx, and trachea	ICD-9-CM	Diagnosis
807.0	Closed fracture of rib(s)	ICD-9-CM	Diagnosis
807.00	Closed fracture of rib(s), unspecified	ICD-9-CM	Diagnosis
807.01	Closed fracture of one rib	ICD-9-CM	Diagnosis
807.02	Closed fracture of two ribs	ICD-9-CM	Diagnosis
807.03	Closed fracture of three ribs	ICD-9-CM	Diagnosis
807.04	Closed fracture of four ribs	ICD-9-CM	Diagnosis
807.05	Closed fracture of five ribs	ICD-9-CM	Diagnosis
807.06	Closed fracture of six ribs	ICD-9-CM	Diagnosis
807.07	Closed fracture of seven ribs	ICD-9-CM	Diagnosis
807.08	Closed fracture of eight or more ribs	ICD-9-CM	Diagnosis
807.09	Closed fracture of multiple ribs, unspecified	ICD-9-CM	Diagnosis
807.1	Open fracture of rib(s)	ICD-9-CM	Diagnosis
807.10	Open fracture of rib(s), unspecified	ICD-9-CM	Diagnosis
807.11	Open fracture of one rib	ICD-9-CM	Diagnosis
807.12	Open fracture of two ribs	ICD-9-CM	Diagnosis
807.13	Open fracture of three ribs	ICD-9-CM	Diagnosis
807.14	Open fracture of four ribs	ICD-9-CM	Diagnosis
807.15	Open fracture of five ribs	ICD-9-CM	Diagnosis
807.16	Open fracture of six ribs	ICD-9-CM	Diagnosis
807.17	Open fracture of seven ribs	ICD-9-CM	Diagnosis
807.18	Open fracture of eight or more ribs	ICD-9-CM	Diagnosis
807.19	Open fracture of multiple ribs, unspecified	ICD-9-CM	Diagnosis
807.2	Closed fracture of sternum	ICD-9-CM	Diagnosis
807.3	Open fracture of sternum	ICD-9-CM	Diagnosis
807.4	Flail chest	ICD-9-CM	Diagnosis
807.5	Closed fracture of larynx and trachea	ICD-9-CM	Diagnosis
807.6	Open fracture of larynx and trachea	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
808	Fracture of pelvis	ICD-9-CM	Diagnosis
808.0	Closed fracture of acetabulum	ICD-9-CM	Diagnosis
808.1	Open fracture of acetabulum	ICD-9-CM	Diagnosis
808.2	Closed fracture of pubis	ICD-9-CM	Diagnosis
808.3	Open fracture of pubis	ICD-9-CM	Diagnosis
808.4	Closed fracture of other specified part of pelvis	ICD-9-CM	Diagnosis
808.41	Closed fracture of ilium	ICD-9-CM	Diagnosis
808.42	Closed fracture of ischium	ICD-9-CM	Diagnosis
808.43	Multiple closed pelvic fractures with disruption of pelvic circle	ICD-9-CM	Diagnosis
808.44	Multiple closed pelvic fractures without disruption of pelvic circle	ICD-9-CM	Diagnosis
808.49	Closed fracture of other specified part of pelvis	ICD-9-CM	Diagnosis
808.5	Open fracture of other specified part of pelvis	ICD-9-CM	Diagnosis
808.51	Open fracture of ilium	ICD-9-CM	Diagnosis
808.52	Open fracture of ischium	ICD-9-CM	Diagnosis
808.53	Multiple open pelvic fractures with disruption of pelvic circle	ICD-9-CM	Diagnosis
808.54	Multiple open pelvic fractures without disruption of pelvic circle	ICD-9-CM	Diagnosis
808.59	Open fracture of other specified part of pelvis	ICD-9-CM	Diagnosis
808.8	Unspecified closed fracture of pelvis	ICD-9-CM	Diagnosis
808.9	Unspecified open fracture of pelvis	ICD-9-CM	Diagnosis
809	Ill-defined fractures of bones of trunk	ICD-9-CM	Diagnosis
809.0	Fracture of bones of trunk, closed	ICD-9-CM	Diagnosis
809.1	Fracture of bones of trunk, open	ICD-9-CM	Diagnosis
810	Fracture of clavicle	ICD-9-CM	Diagnosis
810.0	Closed fracture of clavicle	ICD-9-CM	Diagnosis
810.00	Unspecified part of closed fracture of clavicle	ICD-9-CM	Diagnosis
810.01	Closed fracture of sternal end of clavicle	ICD-9-CM	Diagnosis
810.02	Closed fracture of shaft of clavicle	ICD-9-CM	Diagnosis
810.03	Closed fracture of acromial end of clavicle	ICD-9-CM	Diagnosis
810.1	Open fracture of clavicle	ICD-9-CM	Diagnosis
810.10	Unspecified part of open fracture of clavicle	ICD-9-CM	Diagnosis
810.11	Open fracture of sternal end of clavicle	ICD-9-CM	Diagnosis
810.12	Open fracture of shaft of clavicle	ICD-9-CM	Diagnosis
810.13	Open fracture of acromial end of clavicle	ICD-9-CM	Diagnosis
811	Fracture of scapula	ICD-9-CM	Diagnosis
811.0	Closed fracture of scapula	ICD-9-CM	Diagnosis
811.00	Closed fracture of unspecified part of scapula	ICD-9-CM	Diagnosis
811.01	Closed fracture of acromial process of scapula	ICD-9-CM	Diagnosis
811.02	Closed fracture of coracoid process of scapula	ICD-9-CM	Diagnosis
811.03	Closed fracture of glenoid cavity and neck of scapula	ICD-9-CM	Diagnosis
811.09	Closed fracture of other part of scapula	ICD-9-CM	Diagnosis
811.1	Open fracture of scapula	ICD-9-CM	Diagnosis
811.10	Open fracture of unspecified part of scapula	ICD-9-CM	Diagnosis
811.11	Open fracture of acromial process of scapula	ICD-9-CM	Diagnosis
811.12	Open fracture of coracoid process	ICD-9-CM	Diagnosis
811.13	Open fracture of glenoid cavity and neck of scapula	ICD-9-CM	Diagnosis
811.19	Open fracture of other part of scapula	ICD-9-CM	Diagnosis
812	Fracture of humerus	ICD-9-CM	Diagnosis
812.0	Closed fracture of upper end of humerus	ICD-9-CM	Diagnosis
812.00	Closed fracture of unspecified part of upper end of humerus	ICD-9-CM	Diagnosis
812.01	Closed fracture of surgical neck of humerus	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
812.02	Closed fracture of anatomical neck of humerus	ICD-9-CM	Diagnosis
812.03	Closed fracture of greater tuberosity of humerus	ICD-9-CM	Diagnosis
812.09	Other closed fractures of upper end of humerus	ICD-9-CM	Diagnosis
812.1	Open fracture of upper end of humerus	ICD-9-CM	Diagnosis
812.10	Open fracture of unspecified part of upper end of humerus	ICD-9-CM	Diagnosis
812.11	Open fracture of surgical neck of humerus	ICD-9-CM	Diagnosis
812.12	Open fracture of anatomical neck of humerus	ICD-9-CM	Diagnosis
812.13	Open fracture of greater tuberosity of humerus	ICD-9-CM	Diagnosis
812.19	Other open fracture of upper end of humerus	ICD-9-CM	Diagnosis
812.2	Closed fracture of shaft or unspecified part of humerus	ICD-9-CM	Diagnosis
812.20	Closed fracture of unspecified part of humerus	ICD-9-CM	Diagnosis
812.21	Closed fracture of shaft of humerus	ICD-9-CM	Diagnosis
812.3	Open fracture of shaft or unspecified part of humerus	ICD-9-CM	Diagnosis
812.30	Open fracture of unspecified part of humerus	ICD-9-CM	Diagnosis
812.31	Open fracture of shaft of humerus	ICD-9-CM	Diagnosis
812.4	Closed fracture of lower end of humerus	ICD-9-CM	Diagnosis
812.40	Closed fracture of unspecified part of lower end of humerus	ICD-9-CM	Diagnosis
812.41	Closed fracture of supracondylar humerus	ICD-9-CM	Diagnosis
812.42	Closed fracture of lateral condyle of humerus	ICD-9-CM	Diagnosis
812.43	Closed fracture of medial condyle of humerus	ICD-9-CM	Diagnosis
812.44	Closed fracture of unspecified condyle(s) of humerus	ICD-9-CM	Diagnosis
812.49	Other closed fracture of lower end of humerus	ICD-9-CM	Diagnosis
812.5	Open fracture of lower end of humerus	ICD-9-CM	Diagnosis
812.50	Open fracture of unspecified part of lower end of humerus	ICD-9-CM	Diagnosis
812.51	Open fracture of supracondylar humerus	ICD-9-CM	Diagnosis
812.52	Open fracture of lateral condyle of humerus	ICD-9-CM	Diagnosis
812.53	Open fracture of medial condyle of humerus	ICD-9-CM	Diagnosis
812.54	Open fracture of unspecified condyle(s) of humerus	ICD-9-CM	Diagnosis
812.59	Other open fracture of lower end of humerus	ICD-9-CM	Diagnosis
813	Fracture of radius and ulna	ICD-9-CM	Diagnosis
813.0	Closed fracture of upper end of radius and ulna	ICD-9-CM	Diagnosis
813.00	Unspecified fracture of radius and ulna, upper end of forearm, closed	ICD-9-CM	Diagnosis
813.01	Closed fracture of olecranon process of ulna	ICD-9-CM	Diagnosis
813.02	Closed fracture of coronoid process of ulna	ICD-9-CM	Diagnosis
813.03	Closed Monteggia's fracture	ICD-9-CM	Diagnosis
813.04	Other and unspecified closed fractures of proximal end of ulna (alone)	ICD-9-CM	Diagnosis
813.05	Closed fracture of head of radius	ICD-9-CM	Diagnosis
813.06	Closed fracture of neck of radius	ICD-9-CM	Diagnosis
813.07	Other and unspecified closed fractures of proximal end of radius (alone)	ICD-9-CM	Diagnosis
813.08	Closed fracture of radius with ulna, upper end (any part)	ICD-9-CM	Diagnosis
813.1	Open fracture of upper end of radius and ulna	ICD-9-CM	Diagnosis
813.10	Unspecified open fracture of upper end of forearm	ICD-9-CM	Diagnosis
813.11	Open fracture of olecranon process of ulna	ICD-9-CM	Diagnosis
813.12	Open fracture of coronoid process of ulna	ICD-9-CM	Diagnosis
813.13	Open Monteggia's fracture	ICD-9-CM	Diagnosis
813.14	Other and unspecified open fractures of proximal end of ulna (alone)	ICD-9-CM	Diagnosis
813.15	Open fracture of head of radius	ICD-9-CM	Diagnosis
813.16	Open fracture of neck of radius	ICD-9-CM	Diagnosis
813.17	Other and unspecified open fractures of proximal end of radius (alone)	ICD-9-CM	Diagnosis
813.18	Open fracture of radius with ulna, upper end (any part)	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
813.2	Closed fracture of shaft of radius and ulna	ICD-9-CM	Diagnosis
813.20	Unspecified closed fracture of shaft of radius or ulna	ICD-9-CM	Diagnosis
813.21	Closed fracture of shaft of radius (alone)	ICD-9-CM	Diagnosis
813.22	Closed fracture of shaft of ulna (alone)	ICD-9-CM	Diagnosis
813.23	Closed fracture of shaft of radius with ulna	ICD-9-CM	Diagnosis
813.3	Open fracture of shaft of radius and ulna	ICD-9-CM	Diagnosis
813.30	Unspecified open fracture of shaft of radius or ulna	ICD-9-CM	Diagnosis
813.31	Open fracture of shaft of radius (alone)	ICD-9-CM	Diagnosis
813.32	Open fracture of shaft of ulna (alone)	ICD-9-CM	Diagnosis
813.33	Open fracture of shaft of radius with ulna	ICD-9-CM	Diagnosis
813.4	Closed fracture of lower end of radius and ulna	ICD-9-CM	Diagnosis
813.40	Unspecified closed fracture of lower end of forearm	ICD-9-CM	Diagnosis
813.41	Closed Colles' fracture	ICD-9-CM	Diagnosis
813.42	Other closed fractures of distal end of radius (alone)	ICD-9-CM	Diagnosis
813.43	Closed fracture of distal end of ulna (alone)	ICD-9-CM	Diagnosis
813.44	Closed fracture of lower end of radius with ulna	ICD-9-CM	Diagnosis
813.45	Torus fracture of radius (alone)	ICD-9-CM	Diagnosis
813.46	Torus fracture of ulna (alone)	ICD-9-CM	Diagnosis
813.47	Torus fracture of radius and ulna	ICD-9-CM	Diagnosis
813.5	Open fracture of lower end of radius and ulna	ICD-9-CM	Diagnosis
813.50	Unspecified open fracture of lower end of forearm	ICD-9-CM	Diagnosis
813.51	Open Colles' fracture	ICD-9-CM	Diagnosis
813.52	Other open fractures of distal end of radius (alone)	ICD-9-CM	Diagnosis
813.53	Open fracture of distal end of ulna (alone)	ICD-9-CM	Diagnosis
813.54	Open fracture of lower end of radius with ulna	ICD-9-CM	Diagnosis
813.8	Closed fracture of unspecified part of radius with ulna	ICD-9-CM	Diagnosis
813.80	Closed fracture of unspecified part of forearm	ICD-9-CM	Diagnosis
813.81	Closed fracture of unspecified part of radius (alone)	ICD-9-CM	Diagnosis
813.82	Closed fracture of unspecified part of ulna (alone)	ICD-9-CM	Diagnosis
813.83	Closed fracture of unspecified part of radius with ulna	ICD-9-CM	Diagnosis
813.9	Open fracture of unspecified part of radius with ulna	ICD-9-CM	Diagnosis
813.90	Open fracture of unspecified part of forearm	ICD-9-CM	Diagnosis
813.91	Open fracture of unspecified part of radius (alone)	ICD-9-CM	Diagnosis
813.92	Open fracture of unspecified part of ulna (alone)	ICD-9-CM	Diagnosis
813.93	Open fracture of unspecified part of radius with ulna	ICD-9-CM	Diagnosis
818	Ill-defined fractures of upper limb	ICD-9-CM	Diagnosis
818.0	Ill-defined closed fractures of upper limb	ICD-9-CM	Diagnosis
818.1	Ill-defined open fractures of upper limb	ICD-9-CM	Diagnosis
819	Multiple fractures involving both upper limbs, and upper limb with rib(s) and sternum	ICD-9-CM	Diagnosis
819.0	Multiple closed fractures involving both upper limbs, and upper limb with rib(s) and sternum	ICD-9-CM	Diagnosis
819.1	Multiple open fractures involving both upper limbs, and upper limb with rib(s) and sternum	ICD-9-CM	Diagnosis
820	Fracture of neck of femur	ICD-9-CM	Diagnosis
820.0	Closed transcervical fracture	ICD-9-CM	Diagnosis
820.00	Closed fracture of unspecified intracapsular section of neck of femur	ICD-9-CM	Diagnosis
820.01	Closed fracture of epiphysis (separation) (upper) of neck of femur	ICD-9-CM	Diagnosis
820.02	Closed fracture of midcervical section of femur	ICD-9-CM	Diagnosis
820.03	Closed fracture of base of neck of femur	ICD-9-CM	Diagnosis
820.09	Other closed transcervical fracture of femur	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
820.1	Open transcervical fracture	ICD-9-CM	Diagnosis
820.10	Open fracture of unspecified intracapsular section of neck of femur	ICD-9-CM	Diagnosis
820.11	Open fracture of epiphysis (separation) (upper) of neck of femur	ICD-9-CM	Diagnosis
820.12	Open fracture of midcervical section of femur	ICD-9-CM	Diagnosis
820.13	Open fracture of base of neck of femur	ICD-9-CM	Diagnosis
820.19	Other open transcervical fracture of femur	ICD-9-CM	Diagnosis
820.2	Closed pertrochanteric fracture of femur	ICD-9-CM	Diagnosis
820.20	Closed fracture of unspecified trochanteric section of femur	ICD-9-CM	Diagnosis
820.21	Closed fracture of intertrochanteric section of femur	ICD-9-CM	Diagnosis
820.22	Closed fracture of subtrochanteric section of femur	ICD-9-CM	Diagnosis
820.3	Open pertrochanteric fracture of femur	ICD-9-CM	Diagnosis
820.30	Open fracture of unspecified trochanteric section of femur	ICD-9-CM	Diagnosis
820.31	Open fracture of intertrochanteric section of femur	ICD-9-CM	Diagnosis
820.32	Open fracture of subtrochanteric section of femur	ICD-9-CM	Diagnosis
820.8	Closed fracture of unspecified part of neck of femur	ICD-9-CM	Diagnosis
820.9	Open fracture of unspecified part of neck of femur	ICD-9-CM	Diagnosis
821	Fracture of other and unspecified parts of femur	ICD-9-CM	Diagnosis
821.0	Closed fracture of shaft or unspecified part of femur	ICD-9-CM	Diagnosis
821.00	Closed fracture of unspecified part of femur	ICD-9-CM	Diagnosis
821.01	Closed fracture of shaft of femur	ICD-9-CM	Diagnosis
821.1	Open fracture of shaft or unspecified part of femur	ICD-9-CM	Diagnosis
821.10	Open fracture of unspecified part of femur	ICD-9-CM	Diagnosis
821.11	Open fracture of shaft of femur	ICD-9-CM	Diagnosis
821.2	Closed fracture of lower end of femur	ICD-9-CM	Diagnosis
821.20	Closed fracture of unspecified part of lower end of femur	ICD-9-CM	Diagnosis
821.21	Closed fracture of femoral condyle	ICD-9-CM	Diagnosis
821.22	Closed fracture of lower epiphysis of femur	ICD-9-CM	Diagnosis
821.23	Closed supracondylar fracture of femur	ICD-9-CM	Diagnosis
821.29	Other closed fracture of lower end of femur	ICD-9-CM	Diagnosis
821.3	Open fracture of lower end of femur	ICD-9-CM	Diagnosis
821.30	Open fracture of unspecified part of lower end of femur	ICD-9-CM	Diagnosis
821.31	Open fracture of femoral condyle	ICD-9-CM	Diagnosis
821.32	Open fracture of lower epiphysis of femur	ICD-9-CM	Diagnosis
821.33	Open supracondylar fracture of femur	ICD-9-CM	Diagnosis
821.39	Other open fracture of lower end of femur	ICD-9-CM	Diagnosis
822	Fracture of patella	ICD-9-CM	Diagnosis
822.0	Closed fracture of patella	ICD-9-CM	Diagnosis
822.1	Open fracture of patella	ICD-9-CM	Diagnosis
823	Fracture of tibia and fibula	ICD-9-CM	Diagnosis
823.0	Closed fracture of upper end of tibia and fibula	ICD-9-CM	Diagnosis
823.00	Closed fracture of upper end of tibia	ICD-9-CM	Diagnosis
823.01	Closed fracture of upper end of fibula	ICD-9-CM	Diagnosis
823.02	Closed fracture of upper end of fibula with tibia	ICD-9-CM	Diagnosis
823.1	Open fracture of upper end of tibia and fibula	ICD-9-CM	Diagnosis
823.10	Open fracture of upper end of tibia	ICD-9-CM	Diagnosis
823.11	Open fracture of upper end of fibula	ICD-9-CM	Diagnosis
823.12	Open fracture of upper end of fibula with tibia	ICD-9-CM	Diagnosis
823.2	Closed fracture of shaft of tibia and fibula	ICD-9-CM	Diagnosis
823.20	Closed fracture of shaft of tibia	ICD-9-CM	Diagnosis
823.21	Closed fracture of shaft of fibula	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
823.22	Closed fracture of shaft of fibula with tibia	ICD-9-CM	Diagnosis
823.3	Open fracture of shaft of tibia and fibula	ICD-9-CM	Diagnosis
823.30	Open fracture of shaft of tibia	ICD-9-CM	Diagnosis
823.31	Open fracture of shaft of fibula	ICD-9-CM	Diagnosis
823.32	Open fracture of shaft of fibula with tibia	ICD-9-CM	Diagnosis
823.4	Torus fracture of tibia and fibula	ICD-9-CM	Diagnosis
823.40	Torus fracture of tibia alone	ICD-9-CM	Diagnosis
823.41	Torus fracture of fibula alone	ICD-9-CM	Diagnosis
823.42	Torus fracture of fibula with tibia	ICD-9-CM	Diagnosis
823.8	Closed fracture of unspecified part of tibia and fibula	ICD-9-CM	Diagnosis
823.80	Closed fracture of unspecified part of tibia	ICD-9-CM	Diagnosis
823.81	Closed fracture of unspecified part of fibula	ICD-9-CM	Diagnosis
823.82	Closed fracture of unspecified part of fibula with tibia	ICD-9-CM	Diagnosis
823.9	Open fracture of unspecified part of tibia and fibula	ICD-9-CM	Diagnosis
823.90	Open fracture of unspecified part of tibia	ICD-9-CM	Diagnosis
823.91	Open fracture of unspecified part of fibula	ICD-9-CM	Diagnosis
823.92	Open fracture of unspecified part of fibula with tibia	ICD-9-CM	Diagnosis
824	Fracture of ankle	ICD-9-CM	Diagnosis
824.0	Closed fracture of medial malleolus	ICD-9-CM	Diagnosis
824.1	Open fracture of medial malleolus	ICD-9-CM	Diagnosis
824.2	Closed fracture of lateral malleolus	ICD-9-CM	Diagnosis
824.3	Open fracture of lateral malleolus	ICD-9-CM	Diagnosis
824.4	Closed bimalleolar fracture	ICD-9-CM	Diagnosis
824.5	Open bimalleolar fracture	ICD-9-CM	Diagnosis
824.6	Closed trimalleolar fracture	ICD-9-CM	Diagnosis
824.7	Open trimalleolar fracture	ICD-9-CM	Diagnosis
824.8	Unspecified closed fracture of ankle	ICD-9-CM	Diagnosis
824.9	Unspecified open fracture of ankle	ICD-9-CM	Diagnosis
827	Other, multiple, and ill-defined fractures of lower limb	ICD-9-CM	Diagnosis
827.0	Other, multiple and ill-defined closed fractures of lower limb	ICD-9-CM	Diagnosis
827.1	Other, multiple and ill-defined open fractures of lower limb	ICD-9-CM	Diagnosis
828	Multiple fractures involving both lower limbs, lower with upper limb, and lower limb(s) with rib(s) and sternum	ICD-9-CM	Diagnosis
828.0	Multiple closed fractures involving both lower limbs, lower with upper limb, and lower limb(s) with rib(s) and sternum	ICD-9-CM	Diagnosis
828.1	Multiple fractures involving both lower limbs, lower with upper limb, and lower limb(s) with rib(s) and sternum, open	ICD-9-CM	Diagnosis
829	Fracture of unspecified bones	ICD-9-CM	Diagnosis
829.0	Closed fracture of unspecified bone	ICD-9-CM	Diagnosis
829.1	Open fracture of unspecified bone	ICD-9-CM	Diagnosis
860	Traumatic pneumothorax and hemothorax	ICD-9-CM	Diagnosis
860.0	Traumatic pneumothorax without mention of open wound into thorax	ICD-9-CM	Diagnosis
860.1	Traumatic pneumothorax with open wound into thorax	ICD-9-CM	Diagnosis
860.2	Traumatic hemothorax without mention of open wound into thorax	ICD-9-CM	Diagnosis
860.3	Traumatic hemothorax with open wound into thorax	ICD-9-CM	Diagnosis
860.4	Traumatic pneumohemothorax without mention of open wound into thorax	ICD-9-CM	Diagnosis
860.5	Traumatic pneumohemothorax with open wound into thorax	ICD-9-CM	Diagnosis
862.0	Diaphragm injury without mention of open wound into cavity	ICD-9-CM	Diagnosis
862.1	Diaphragm injury with open wound into cavity	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
862.8	Injury to multiple and unspecified intrathoracic organs without mention of open wound into cavity	ICD-9-CM	Diagnosis
862.9	Injury to multiple and unspecified intrathoracic organs with open wound into cavity	ICD-9-CM	Diagnosis
863.0	Stomach injury without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.1	Stomach injury with open wound into cavity	ICD-9-CM	Diagnosis
863.2	Small intestine injury without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.20	Small intestine injury, unspecified site, without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.21	Duodenum injury without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.29	Other injury to small intestine without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.3	Small intestine injury with open wound into cavity	ICD-9-CM	Diagnosis
863.30	Small intestine injury, unspecified site, with open wound into cavity	ICD-9-CM	Diagnosis
863.31	Duodenum injury with open wound into cavity	ICD-9-CM	Diagnosis
863.39	Other injury to small intestine with open wound into cavity	ICD-9-CM	Diagnosis
863.4	Colon or rectal injury without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.40	Colon injury unspecified site, without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.41	Ascending (right) colon injury without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.42	Transverse colon injury without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.43	Descending (left) colon injury without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.44	Sigmoid colon injury without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.45	Rectum injury without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.46	Injury to multiple sites in colon and rectum without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.49	Other colon and rectum injury, without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.5	Injury to colon or rectum with open wound into cavity	ICD-9-CM	Diagnosis
863.50	Colon injury, unspecified site, with open wound into cavity	ICD-9-CM	Diagnosis
863.51	Ascending (right) colon injury with open wound into cavity	ICD-9-CM	Diagnosis
863.52	Transverse colon injury with open wound into cavity	ICD-9-CM	Diagnosis
863.53	Descending (left) colon injury with open wound into cavity	ICD-9-CM	Diagnosis
863.54	Sigmoid colon injury with open wound into cavity	ICD-9-CM	Diagnosis
863.55	Rectum injury with open wound into cavity	ICD-9-CM	Diagnosis
863.56	Injury to multiple sites in colon and rectum with open wound into cavity	ICD-9-CM	Diagnosis
863.59	Other injury to colon and rectum with open wound into cavity	ICD-9-CM	Diagnosis
863.8	Injury to other and unspecified gastrointestinal sites without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.80	Gastrointestinal tract injury, unspecified site, without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.81	Pancreas head injury without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.82	Pancreas body injury without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.83	Pancreas tail injury without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.84	Pancreas injury, multiple and unspecified sites, without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.85	Appendix injury without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.89	Injury to other and unspecified gastrointestinal sites without mention of open wound into cavity	ICD-9-CM	Diagnosis
863.9	Injury to other and unspecified gastrointestinal sites, with open wound into cavity	ICD-9-CM	Diagnosis
863.90	Gastrointestinal tract injury, unspecified site, with open wound into cavity	ICD-9-CM	Diagnosis
863.91	Pancreas head injury with open wound into cavity	ICD-9-CM	Diagnosis
863.92	Pancreas body injury with open wound into cavity	ICD-9-CM	Diagnosis
863.93	Pancreas tail injury with open wound into cavity	ICD-9-CM	Diagnosis
863.94	Pancreas injury, multiple and unspecified sites, with open wound into cavity	ICD-9-CM	Diagnosis
863.95	Appendix injury with open wound into cavity	ICD-9-CM	Diagnosis
863.99	Injury to other and unspecified gastrointestinal sites with open wound into cavity	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
864.1	Liver injury with open wound into cavity	ICD-9-CM	Diagnosis
864.10	Unspecified liver injury with open wound into cavity	ICD-9-CM	Diagnosis
864.11	Liver hematoma and contusion with open wound into cavity	ICD-9-CM	Diagnosis
864.12	Liver laceration, minor, with open wound into cavity	ICD-9-CM	Diagnosis
864.13	Liver laceration, moderate, with open wound into cavity	ICD-9-CM	Diagnosis
864.14	Liver laceration, major, with open wound into cavity	ICD-9-CM	Diagnosis
864.15	Liver injury with open wound into cavity, unspecified laceration	ICD-9-CM	Diagnosis
864.19	Other liver injury with open wound into cavity	ICD-9-CM	Diagnosis
865.1	Spleen injury with open wound into cavity	ICD-9-CM	Diagnosis
865.10	Unspecified spleen injury with open wound into cavity	ICD-9-CM	Diagnosis
865.11	Spleen hematoma, without rupture of capsule, with open wound into cavity	ICD-9-CM	Diagnosis
865.12	Capsular tears to spleen, without major disruption of parenchyma, with open wound into cavity	ICD-9-CM	Diagnosis
865.13	Spleen laceration extending into parenchyma, with open wound into cavity	ICD-9-CM	Diagnosis
865.14	Massive parenchyma disruption of spleen with open wound into cavity	ICD-9-CM	Diagnosis
865.19	Other spleen injury with open wound into cavity	ICD-9-CM	Diagnosis
866	Injury to kidney	ICD-9-CM	Diagnosis
866.0	Kidney injury without mention of open wound into cavity	ICD-9-CM	Diagnosis
866.00	Unspecified kidney injury without mention of open wound into cavity	ICD-9-CM	Diagnosis
866.01	Kidney hematoma without rupture of capsule or mention of open wound into cavity	ICD-9-CM	Diagnosis
866.02	Kidney laceration without mention of open wound into cavity	ICD-9-CM	Diagnosis
866.03	Complete disruption of kidney parenchyma, without mention of open wound into cavity	ICD-9-CM	Diagnosis
866.1	Kidney injury with open wound into cavity	ICD-9-CM	Diagnosis
866.10	Unspecified kidney injury with open wound into cavity	ICD-9-CM	Diagnosis
866.11	Kidney hematoma, without rupture of capsule, with open wound into cavity	ICD-9-CM	Diagnosis
866.12	Kidney laceration with open wound into cavity	ICD-9-CM	Diagnosis
866.13	Complete disruption of kidney parenchyma, with open wound into cavity	ICD-9-CM	Diagnosis
867	Injury to pelvic organs	ICD-9-CM	Diagnosis
867.0	Bladder and urethra injury without mention of open wound into cavity	ICD-9-CM	Diagnosis
867.1	Bladder and urethra injury with open wound into cavity	ICD-9-CM	Diagnosis
867.2	Ureter injury without mention of open wound into cavity	ICD-9-CM	Diagnosis
867.3	Ureter injury with open wound into cavity	ICD-9-CM	Diagnosis
867.4	Uterus injury without mention of open wound into cavity	ICD-9-CM	Diagnosis
867.5	Uterus injury with open wound into cavity	ICD-9-CM	Diagnosis
867.6	Injury to other specified pelvic organs without mention of open wound into cavity	ICD-9-CM	Diagnosis
867.7	Injury to other specified pelvic organs with open wound into cavity	ICD-9-CM	Diagnosis
867.8	Injury to unspecified pelvic organ without mention of open wound into cavity	ICD-9-CM	Diagnosis
867.9	Injury to unspecified pelvic organ with open wound into cavity	ICD-9-CM	Diagnosis
873.0	Open wound of scalp, without mention of complication	ICD-9-CM	Diagnosis
873.1	Open wound of scalp, complicated	ICD-9-CM	Diagnosis
875.0	Open wound of chest (wall), without mention of complication	ICD-9-CM	Diagnosis
875.1	Open wound of chest (wall), complicated	ICD-9-CM	Diagnosis
902.4	Renal blood vessel injury	ICD-9-CM	Diagnosis
902.40	Renal vessel(s) injury, unspecified	ICD-9-CM	Diagnosis
902.41	Renal artery injury	ICD-9-CM	Diagnosis
902.42	Renal vein injury	ICD-9-CM	Diagnosis
902.49	Renal blood vessel injury, other	ICD-9-CM	Diagnosis
902.55	Uterine artery injury	ICD-9-CM	Diagnosis
902.56	Uterine vein injury	ICD-9-CM	Diagnosis
902.81	Ovarian artery injury	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
902.82	Ovarian vein injury	ICD-9-CM	Diagnosis
925	Crushing injury of face, scalp, and neck	ICD-9-CM	Diagnosis
925.1	Crushing injury of face and scalp	ICD-9-CM	Diagnosis
925.2	Crushing injury of neck	ICD-9-CM	Diagnosis
926	Crushing injury of trunk	ICD-9-CM	Diagnosis
926.0	Crushing injury of external genitalia	ICD-9-CM	Diagnosis
926.1	Crushing injury of other specified sites of trunk	ICD-9-CM	Diagnosis
926.11	Crushing injury of back	ICD-9-CM	Diagnosis
926.12	Crushing injury of buttock	ICD-9-CM	Diagnosis
926.19	Crushing injury of other specified sites of trunk	ICD-9-CM	Diagnosis
926.8	Crushing injury of multiple sites of trunk	ICD-9-CM	Diagnosis
926.9	Crushing injury of unspecified site of trunk	ICD-9-CM	Diagnosis
927	Crushing injury of upper limb	ICD-9-CM	Diagnosis
927.0	Crushing injury of shoulder and upper arm	ICD-9-CM	Diagnosis
927.00	Crushing injury of shoulder region	ICD-9-CM	Diagnosis
927.01	Crushing injury of scapular region	ICD-9-CM	Diagnosis
927.02	Crushing injury of axillary region	ICD-9-CM	Diagnosis
927.03	Crushing injury of upper arm	ICD-9-CM	Diagnosis
927.09	Crushing injury of multiple sites of upper arm	ICD-9-CM	Diagnosis
927.1	Crushing injury of elbow and forearm	ICD-9-CM	Diagnosis
927.10	Crushing injury of forearm	ICD-9-CM	Diagnosis
927.11	Crushing injury of elbow	ICD-9-CM	Diagnosis
927.2	Crushing injury of wrist and hand(s), except finger(s) alone	ICD-9-CM	Diagnosis
927.20	Crushing injury of hand(s)	ICD-9-CM	Diagnosis
927.21	Crushing injury of wrist	ICD-9-CM	Diagnosis
927.3	Crushing injury of finger(s)	ICD-9-CM	Diagnosis
927.8	Crushing injury of multiple sites of upper limb	ICD-9-CM	Diagnosis
927.9	Crushing injury of unspecified site of upper limb	ICD-9-CM	Diagnosis
928	Crushing injury of lower limb	ICD-9-CM	Diagnosis
928.0	Crushing injury of hip and thigh	ICD-9-CM	Diagnosis
928.00	Crushing injury of thigh	ICD-9-CM	Diagnosis
928.01	Crushing injury of hip	ICD-9-CM	Diagnosis
928.1	Crushing injury of knee and lower leg	ICD-9-CM	Diagnosis
928.10	Crushing injury of lower leg	ICD-9-CM	Diagnosis
928.11	Crushing injury of knee	ICD-9-CM	Diagnosis
928.2	Crushing injury of ankle and foot, excluding toe(s) alone	ICD-9-CM	Diagnosis
928.20	Crushing injury of foot	ICD-9-CM	Diagnosis
928.21	Crushing injury of ankle	ICD-9-CM	Diagnosis
928.3	Crushing injury of toe(s)	ICD-9-CM	Diagnosis
928.8	Crushing injury of multiple sites of lower limb	ICD-9-CM	Diagnosis
928.9	Crushing injury of unspecified site of lower limb	ICD-9-CM	Diagnosis
929	Crushing injury of multiple and unspecified sites	ICD-9-CM	Diagnosis
929.0	Crushing injury of multiple sites, not elsewhere classified	ICD-9-CM	Diagnosis
929.9	Crushing injury of unspecified site	ICD-9-CM	Diagnosis
958.4	Traumatic shock	ICD-9-CM	Diagnosis
958.5	Traumatic anuria	ICD-9-CM	Diagnosis
958.7	Traumatic subcutaneous emphysema	ICD-9-CM	Diagnosis
996.7	Other complications of internal prosthetic device, implant, and graft	ICD-9-CM	Diagnosis
996.70	Other complications due to unspecified device, implant, and graft	ICD-9-CM	Diagnosis
996.71	Other complications due to heart valve prosthesis	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
996.72	Other complications due to other cardiac device, implant, and graft	ICD-9-CM	Diagnosis
996.73	Other complications due to renal dialysis device, implant, and graft	ICD-9-CM	Diagnosis
996.74	Other complications due to other vascular device, implant, and graft	ICD-9-CM	Diagnosis
996.75	Other complications due to nervous system device, implant, and graft	ICD-9-CM	Diagnosis
996.76	Other complications due to genitourinary device, implant, and graft	ICD-9-CM	Diagnosis
996.77	Other complications due to internal joint prosthesis	ICD-9-CM	Diagnosis
996.78	Other complications due to other internal orthopedic device, implant, and graft	ICD-9-CM	Diagnosis
996.79	Other complications due to other internal prosthetic device, implant, and graft	ICD-9-CM	Diagnosis
998.11	Hemorrhage complicating a procedure	ICD-9-CM	Diagnosis
998.12	Hematoma complicating a procedure	ICD-9-CM	Diagnosis
998.2	Accidental puncture or laceration during procedure	ICD-9-CM	Diagnosis
E805	Hit by rolling stock	ICD-9-CM	Diagnosis
E805.0	Railway employee hit by rolling stock	ICD-9-CM	Diagnosis
E805.1	Passenger on railway hit by rolling stock	ICD-9-CM	Diagnosis
E805.2	Pedestrian hit by rolling stock	ICD-9-CM	Diagnosis
E805.3	Pedal cyclist hit by rolling stock	ICD-9-CM	Diagnosis
E805.8	Other specified person hit by rolling stock	ICD-9-CM	Diagnosis
E805.9	Unspecified person hit by rolling stock	ICD-9-CM	Diagnosis
E870	Accidental cut, puncture, perforation, or hemorrhage during medical care	ICD-9-CM	Diagnosis
E870.0	Accidental cut, puncture, perforation, or hemorrhage during surgical operation	ICD-9-CM	Diagnosis
E870.1	Accidental cut, puncture, perforation, or hemorrhage during infusion or transfusion	ICD-9-CM	Diagnosis
E870.2	Accidental cut, puncture, perforation, or hemorrhage during kidney dialysis or other perfusion	ICD-9-CM	Diagnosis
E870.3	Accidental cut, puncture, perforation, or hemorrhage during injection or vaccination	ICD-9-CM	Diagnosis
E870.4	Accidental cut, puncture, perforation, or hemorrhage during endoscopic examination	ICD-9-CM	Diagnosis
E870.5	Accidental cut, puncture, perforation, or hemorrhage during aspiration of fluid or tissue, puncture, and catheterization	ICD-9-CM	Diagnosis
E870.6	Accidental cut, puncture, perforation, or hemorrhage during heart catheterization	ICD-9-CM	Diagnosis
E870.7	Accidental cut, puncture, perforation, or hemorrhage during administration of enema	ICD-9-CM	Diagnosis
E870.8	Accidental cut, puncture, perforation, or hemorrhage during other specified medical care	ICD-9-CM	Diagnosis
E870.9	Accidental cut, puncture, perforation, or hemorrhage during unspecified medical care	ICD-9-CM	Diagnosis
E881	Accidental fall on or from ladders or scaffolding	ICD-9-CM	Diagnosis
E881.0	Accidental fall from ladder	ICD-9-CM	Diagnosis
E881.1	Accidental fall from scaffolding	ICD-9-CM	Diagnosis
E882	Accidental fall from or out of building or other structure	ICD-9-CM	Diagnosis
E883	Accidental fall into hole or other opening in surface	ICD-9-CM	Diagnosis
E883.0	Accident from diving or jumping into water (swimming pool)	ICD-9-CM	Diagnosis
E883.1	Accidental fall into well	ICD-9-CM	Diagnosis
E883.2	Accidental fall into storm drain or manhole	ICD-9-CM	Diagnosis
E883.9	Accidental fall into other hole or other opening in surface	ICD-9-CM	Diagnosis
E922	Accident caused by firearm, and air gun missiles	ICD-9-CM	Diagnosis
E922.0	Accident caused by handgun	ICD-9-CM	Diagnosis
E922.1	Accident caused by shotgun (automatic)	ICD-9-CM	Diagnosis
E922.2	Accident caused by hunting rifle	ICD-9-CM	Diagnosis
E922.3	Accident caused by military firearms	ICD-9-CM	Diagnosis
E922.4	Accident caused by air gun	ICD-9-CM	Diagnosis
E922.5	Accident caused by paintball gun	ICD-9-CM	Diagnosis
E922.8	Accident caused by other specified firearm missile	ICD-9-CM	Diagnosis
E922.9	Accident caused by unspecified firearm missile	ICD-9-CM	Diagnosis
E923	Accident caused by explosive material	ICD-9-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
E923.0	Accident caused by fireworks	ICD-9-CM	Diagnosis
E923.1	Accident caused by blasting materials	ICD-9-CM	Diagnosis
E923.2	Accident caused by explosive gases	ICD-9-CM	Diagnosis
E923.8	Accident caused by other explosive materials	ICD-9-CM	Diagnosis
E923.9	Accident caused by unspecified explosive material	ICD-9-CM	Diagnosis
E955	Suicide and self-inflicted injury by firearms, air guns and explosives	ICD-9-CM	Diagnosis
E955.0	Suicide and self-inflicted injury by handgun	ICD-9-CM	Diagnosis
E955.1	Suicide and self-inflicted injury by shotgun	ICD-9-CM	Diagnosis
E955.2	Suicide and self-inflicted injury by hunting rifle	ICD-9-CM	Diagnosis
E955.3	Suicide and self-inflicted injury by military firearms	ICD-9-CM	Diagnosis
E955.4	Suicide and self-inflicted injury by other and unspecified firearm	ICD-9-CM	Diagnosis
E955.5	Suicide and self-inflicted injury by explosives	ICD-9-CM	Diagnosis
E955.6	Suicide and self-inflicted injury by air gun	ICD-9-CM	Diagnosis
E955.7	Suicide and self-inflicted injury by paintball gun	ICD-9-CM	Diagnosis
E955.9	Suicide and self-inflicted injury by firearms and explosives, unspecified	ICD-9-CM	Diagnosis
E960	Fight, brawl, rape	ICD-9-CM	Diagnosis
E960.0	Unarmed fight or brawl	ICD-9-CM	Diagnosis
E960.1	Rape	ICD-9-CM	Diagnosis
E965	Assault by firearms and explosives	ICD-9-CM	Diagnosis
E965.0	Assault by handgun	ICD-9-CM	Diagnosis
E965.1	Assault by shotgun	ICD-9-CM	Diagnosis
E965.2	Assault by hunting rifle	ICD-9-CM	Diagnosis
E965.3	Assault by military firearms	ICD-9-CM	Diagnosis
E965.4	Assault by other and unspecified firearm	ICD-9-CM	Diagnosis
E965.5	Assault by antipersonnel bomb	ICD-9-CM	Diagnosis
E965.6	Assault by gasoline bomb	ICD-9-CM	Diagnosis
E965.7	Assault by letter bomb	ICD-9-CM	Diagnosis
E965.8	Assault by other specified explosive	ICD-9-CM	Diagnosis
E965.9	Assault by unspecified explosive	ICD-9-CM	Diagnosis
E970	Injury due to legal intervention by firearms	ICD-9-CM	Diagnosis
E985	Injury by firearms, air guns and explosives, undetermined whether accidentally or purposely inflicted	ICD-9-CM	Diagnosis
E985.0	Injury by handgun, undetermined whether accidentally or purposely inflicted	ICD-9-CM	Diagnosis
E985.1	Injury by shotgun, undetermined whether accidentally or purposely inflicted	ICD-9-CM	Diagnosis
E985.2	Injury by hunting rifle, undetermined whether accidentally or purposely inflicted	ICD-9-CM	Diagnosis
E985.3	Injury by military firearms, undetermined whether accidentally or purposely inflicted	ICD-9-CM	Diagnosis
E985.4	Injury by other and unspecified firearm, undetermined whether accidentally or purposely inflicted	ICD-9-CM	Diagnosis
E985.5	Injury by explosives, undetermined whether accidentally or purposely inflicted	ICD-9-CM	Diagnosis
E985.6	Injury by air gun, undetermined whether accidental, or purposefully inflicted	ICD-9-CM	Diagnosis
E985.7	Injury by paintball gun, undetermined whether accidentally or purposefully inflicted	ICD-9-CM	Diagnosis
D78.01	Intraoperative hemorrhage and hematoma of the spleen complicating a procedure on the spleen	ICD-10-CM	Diagnosis
D78.02	Intraoperative hemorrhage and hematoma of the spleen complicating other procedure	ICD-10-CM	Diagnosis
D78.11	Accidental puncture and laceration of the spleen during a procedure on the spleen	ICD-10-CM	Diagnosis
D78.12	Accidental puncture and laceration of the spleen during other procedure	ICD-10-CM	Diagnosis
D78.21	Postprocedural hemorrhage of the spleen following a procedure on the spleen	ICD-10-CM	Diagnosis
D78.22	Postprocedural hemorrhage of the spleen following other procedure	ICD-10-CM	Diagnosis
D78.31	Postprocedural hematoma of the spleen following a procedure on the spleen	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
D78.32	Postprocedural hematoma of the spleen following other procedure	ICD-10-CM	Diagnosis
E36.01	Intraoperative hemorrhage and hematoma of an endocrine system organ or structure complicating an endocrine system procedure	ICD-10-CM	Diagnosis
E36.02	Intraoperative hemorrhage and hematoma of an endocrine system organ or structure complicating other procedure	ICD-10-CM	Diagnosis
E36.11	Accidental puncture and laceration of an endocrine system organ or structure during an endocrine system procedure	ICD-10-CM	Diagnosis
E36.12	Accidental puncture and laceration of an endocrine system organ or structure during other procedure	ICD-10-CM	Diagnosis
E89.810	Postprocedural hemorrhage of an endocrine system organ or structure following an endocrine system procedure	ICD-10-CM	Diagnosis
E89.811	Postprocedural hemorrhage of an endocrine system organ or structure following other procedure	ICD-10-CM	Diagnosis
E89.820	Postprocedural hematoma of an endocrine system organ or structure following an endocrine system procedure	ICD-10-CM	Diagnosis
E89.821	Postprocedural hematoma of an endocrine system organ or structure following other procedure	ICD-10-CM	Diagnosis
G97.31	Intraoperative hemorrhage and hematoma of a nervous system organ or structure complicating a nervous system procedure	ICD-10-CM	Diagnosis
G97.32	Intraoperative hemorrhage and hematoma of a nervous system organ or structure complicating other procedure	ICD-10-CM	Diagnosis
G97.48	Accidental puncture and laceration of other nervous system organ or structure during a nervous system procedure	ICD-10-CM	Diagnosis
G97.49	Accidental puncture and laceration of other nervous system organ or structure during other procedure	ICD-10-CM	Diagnosis
G97.51	Postprocedural hemorrhage of a nervous system organ or structure following a nervous system procedure	ICD-10-CM	Diagnosis
G97.52	Postprocedural hemorrhage of a nervous system organ or structure following other procedure	ICD-10-CM	Diagnosis
G97.61	Postprocedural hematoma of a nervous system organ or structure following a nervous system procedure	ICD-10-CM	Diagnosis
G97.62	Postprocedural hematoma of a nervous system organ or structure following other procedure	ICD-10-CM	Diagnosis
H59.111	Intraoperative hemorrhage and hematoma of right eye and adnexa complicating an ophthalmic procedure	ICD-10-CM	Diagnosis
H59.112	Intraoperative hemorrhage and hematoma of left eye and adnexa complicating an ophthalmic procedure	ICD-10-CM	Diagnosis
H59.113	Intraoperative hemorrhage and hematoma of eye and adnexa complicating an ophthalmic procedure, bilateral	ICD-10-CM	Diagnosis
H59.119	Intraoperative hemorrhage and hematoma of unspecified eye and adnexa complicating an ophthalmic procedure	ICD-10-CM	Diagnosis
H59.121	Intraoperative hemorrhage and hematoma of right eye and adnexa complicating other procedure	ICD-10-CM	Diagnosis
H59.122	Intraoperative hemorrhage and hematoma of left eye and adnexa complicating other procedure	ICD-10-CM	Diagnosis
H59.123	Intraoperative hemorrhage and hematoma of eye and adnexa complicating other procedure, bilateral	ICD-10-CM	Diagnosis
H59.129	Intraoperative hemorrhage and hematoma of unspecified eye and adnexa complicating other procedure	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
H59.211	Accidental puncture and laceration of right eye and adnexa during an ophthalmic procedure	ICD-10-CM	Diagnosis
H59.212	Accidental puncture and laceration of left eye and adnexa during an ophthalmic procedure	ICD-10-CM	Diagnosis
H59.213	Accidental puncture and laceration of eye and adnexa during an ophthalmic procedure, bilateral	ICD-10-CM	Diagnosis
H59.219	Accidental puncture and laceration of unspecified eye and adnexa during an ophthalmic procedure	ICD-10-CM	Diagnosis
H59.221	Accidental puncture and laceration of right eye and adnexa during other procedure	ICD-10-CM	Diagnosis
H59.222	Accidental puncture and laceration of left eye and adnexa during other procedure	ICD-10-CM	Diagnosis
H59.223	Accidental puncture and laceration of eye and adnexa during other procedure, bilateral	ICD-10-CM	Diagnosis
H59.229	Accidental puncture and laceration of unspecified eye and adnexa during other procedure	ICD-10-CM	Diagnosis
H59.311	Postprocedural hemorrhage of right eye and adnexa following an ophthalmic procedure	ICD-10-CM	Diagnosis
H59.312	Postprocedural hemorrhage of left eye and adnexa following an ophthalmic procedure	ICD-10-CM	Diagnosis
H59.313	Postprocedural hemorrhage of eye and adnexa following an ophthalmic procedure, bilateral	ICD-10-CM	Diagnosis
H59.319	Postprocedural hemorrhage of unspecified eye and adnexa following an ophthalmic procedure	ICD-10-CM	Diagnosis
H59.321	Postprocedural hemorrhage of right eye and adnexa following other procedure	ICD-10-CM	Diagnosis
H59.322	Postprocedural hemorrhage of left eye and adnexa following other procedure	ICD-10-CM	Diagnosis
H59.323	Postprocedural hemorrhage of eye and adnexa following other procedure, bilateral	ICD-10-CM	Diagnosis
H59.329	Postprocedural hemorrhage of unspecified eye and adnexa following other procedure	ICD-10-CM	Diagnosis
H59.331	Postprocedural hematoma of right eye and adnexa following an ophthalmic procedure	ICD-10-CM	Diagnosis
H59.332	Postprocedural hematoma of left eye and adnexa following an ophthalmic procedure	ICD-10-CM	Diagnosis
H59.333	Postprocedural hematoma of eye and adnexa following an ophthalmic procedure, bilateral	ICD-10-CM	Diagnosis
H59.339	Postprocedural hematoma of unspecified eye and adnexa following an ophthalmic procedure	ICD-10-CM	Diagnosis
H59.341	Postprocedural hematoma of right eye and adnexa following other procedure	ICD-10-CM	Diagnosis
H59.342	Postprocedural hematoma of left eye and adnexa following other procedure	ICD-10-CM	Diagnosis
H59.343	Postprocedural hematoma of eye and adnexa following other procedure, bilateral	ICD-10-CM	Diagnosis
H59.349	Postprocedural hematoma of unspecified eye and adnexa following other procedure	ICD-10-CM	Diagnosis
H95.21	Intraoperative hemorrhage and hematoma of ear and mastoid process complicating a procedure on the ear and mastoid process	ICD-10-CM	Diagnosis
H95.22	Intraoperative hemorrhage and hematoma of ear and mastoid process complicating other procedure	ICD-10-CM	Diagnosis
H95.31	Accidental puncture and laceration of the ear and mastoid process during a procedure on the ear and mastoid process	ICD-10-CM	Diagnosis
H95.32	Accidental puncture and laceration of the ear and mastoid process during other procedure	ICD-10-CM	Diagnosis
H95.41	Postprocedural hemorrhage of ear and mastoid process following a procedure on the ear and mastoid process	ICD-10-CM	Diagnosis
H95.42	Postprocedural hemorrhage of ear and mastoid process following other procedure	ICD-10-CM	Diagnosis
H95.51	Postprocedural hematoma of ear and mastoid process following a procedure on the ear and mastoid process	ICD-10-CM	Diagnosis
H95.52	Postprocedural hematoma of ear and mastoid process following other procedure	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
I97.410	Intraoperative hemorrhage and hematoma of a circulatory system organ or structure complicating a cardiac catheterization	ICD-10-CM	Diagnosis
I97.411	Intraoperative hemorrhage and hematoma of a circulatory system organ or structure complicating a cardiac bypass	ICD-10-CM	Diagnosis
I97.418	Intraoperative hemorrhage and hematoma of a circulatory system organ or structure complicating other circulatory system procedure	ICD-10-CM	Diagnosis
I97.42	Intraoperative hemorrhage and hematoma of a circulatory system organ or structure complicating other procedure	ICD-10-CM	Diagnosis
I97.51	Accidental puncture and laceration of a circulatory system organ or structure during a circulatory system procedure	ICD-10-CM	Diagnosis
I97.52	Accidental puncture and laceration of a circulatory system organ or structure during other procedure	ICD-10-CM	Diagnosis
I97.610	Postprocedural hemorrhage of a circulatory system organ or structure following a cardiac catheterization	ICD-10-CM	Diagnosis
I97.611	Postprocedural hemorrhage of a circulatory system organ or structure following cardiac bypass	ICD-10-CM	Diagnosis
I97.618	Postprocedural hemorrhage of a circulatory system organ or structure following other circulatory system procedure	ICD-10-CM	Diagnosis
I97.620	Postprocedural hemorrhage of a circulatory system organ or structure following other procedure	ICD-10-CM	Diagnosis
I97.621	Postprocedural hematoma of a circulatory system organ or structure following other procedure	ICD-10-CM	Diagnosis
I97.630	Postprocedural hematoma of a circulatory system organ or structure following a cardiac catheterization	ICD-10-CM	Diagnosis
I97.631	Postprocedural hematoma of a circulatory system organ or structure following cardiac bypass	ICD-10-CM	Diagnosis
I97.638	Postprocedural hematoma of a circulatory system organ or structure following other circulatory system procedure	ICD-10-CM	Diagnosis
J95.61	Intraoperative hemorrhage and hematoma of a respiratory system organ or structure complicating a respiratory system procedure	ICD-10-CM	Diagnosis
J95.62	Intraoperative hemorrhage and hematoma of a respiratory system organ or structure complicating other procedure	ICD-10-CM	Diagnosis
J95.71	Accidental puncture and laceration of a respiratory system organ or structure during a respiratory system procedure	ICD-10-CM	Diagnosis
J95.72	Accidental puncture and laceration of a respiratory system organ or structure during other procedure	ICD-10-CM	Diagnosis
J95.830	Postprocedural hemorrhage of a respiratory system organ or structure following a respiratory system procedure	ICD-10-CM	Diagnosis
J95.831	Postprocedural hemorrhage of a respiratory system organ or structure following other procedure	ICD-10-CM	Diagnosis
J95.860	Postprocedural hematoma of a respiratory system organ or structure following a respiratory system procedure	ICD-10-CM	Diagnosis
J95.861	Postprocedural hematoma of a respiratory system organ or structure following other procedure	ICD-10-CM	Diagnosis
K91.61	Intraoperative hemorrhage and hematoma of a digestive system organ or structure complicating a digestive system procedure	ICD-10-CM	Diagnosis
K91.62	Intraoperative hemorrhage and hematoma of a digestive system organ or structure complicating other procedure	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
K91.71	Accidental puncture and laceration of a digestive system organ or structure during a digestive system procedure	ICD-10-CM	Diagnosis
K91.72	Accidental puncture and laceration of a digestive system organ or structure during other procedure	ICD-10-CM	Diagnosis
K91.840	Postprocedural hemorrhage of a digestive system organ or structure following a digestive system procedure	ICD-10-CM	Diagnosis
K91.841	Postprocedural hemorrhage of a digestive system organ or structure following other procedure	ICD-10-CM	Diagnosis
K91.870	Postprocedural hematoma of a digestive system organ or structure following a digestive system procedure	ICD-10-CM	Diagnosis
K91.871	Postprocedural hematoma of a digestive system organ or structure following other procedure	ICD-10-CM	Diagnosis
L76.01	Intraoperative hemorrhage and hematoma of skin and subcutaneous tissue complicating a dermatologic procedure	ICD-10-CM	Diagnosis
L76.02	Intraoperative hemorrhage and hematoma of skin and subcutaneous tissue complicating other procedure	ICD-10-CM	Diagnosis
L76.11	Accidental puncture and laceration of skin and subcutaneous tissue during a dermatologic procedure	ICD-10-CM	Diagnosis
L76.12	Accidental puncture and laceration of skin and subcutaneous tissue during other procedure	ICD-10-CM	Diagnosis
L76.21	Postprocedural hemorrhage of skin and subcutaneous tissue following a dermatologic procedure	ICD-10-CM	Diagnosis
L76.22	Postprocedural hemorrhage of skin and subcutaneous tissue following other procedure	ICD-10-CM	Diagnosis
L76.31	Postprocedural hematoma of skin and subcutaneous tissue following a dermatologic procedure	ICD-10-CM	Diagnosis
L76.32	Postprocedural hematoma of skin and subcutaneous tissue following other procedure	ICD-10-CM	Diagnosis
M96.810	Intraoperative hemorrhage and hematoma of a musculoskeletal structure complicating a musculoskeletal system procedure	ICD-10-CM	Diagnosis
M96.811	Intraoperative hemorrhage and hematoma of a musculoskeletal structure complicating other procedure	ICD-10-CM	Diagnosis
M96.820	Accidental puncture and laceration of a musculoskeletal structure during a musculoskeletal system procedure	ICD-10-CM	Diagnosis
M96.821	Accidental puncture and laceration of a musculoskeletal structure during other procedure	ICD-10-CM	Diagnosis
M96.830	Postprocedural hemorrhage of a musculoskeletal structure following a musculoskeletal system procedure	ICD-10-CM	Diagnosis
M96.831	Postprocedural hemorrhage of a musculoskeletal structure following other procedure	ICD-10-CM	Diagnosis
M96.840	Postprocedural hematoma of a musculoskeletal structure following a musculoskeletal system procedure	ICD-10-CM	Diagnosis
M96.841	Postprocedural hematoma of a musculoskeletal structure following other procedure	ICD-10-CM	Diagnosis
N99.61	Intraoperative hemorrhage and hematoma of a genitourinary system organ or structure complicating a genitourinary system procedure	ICD-10-CM	Diagnosis
N99.62	Intraoperative hemorrhage and hematoma of a genitourinary system organ or structure complicating other procedure	ICD-10-CM	Diagnosis
N99.71	Accidental puncture and laceration of a genitourinary system organ or structure during a genitourinary system procedure	ICD-10-CM	Diagnosis
N99.72	Accidental puncture and laceration of a genitourinary system organ or structure during other procedure	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
N99.820	Postprocedural hemorrhage of a genitourinary system organ or structure following a genitourinary system procedure	ICD-10-CM	Diagnosis
N99.821	Postprocedural hemorrhage of a genitourinary system organ or structure following other procedure	ICD-10-CM	Diagnosis
N99.840	Postprocedural hematoma of a genitourinary system organ or structure following a genitourinary system procedure	ICD-10-CM	Diagnosis
N99.841	Postprocedural hematoma of a genitourinary system organ or structure following other procedure	ICD-10-CM	Diagnosis
S01.00XA	Unspecified open wound of scalp, initial encounter	ICD-10-CM	Diagnosis
S01.01XA	Laceration without foreign body of scalp, initial encounter	ICD-10-CM	Diagnosis
S01.02XA	Laceration with foreign body of scalp, initial encounter	ICD-10-CM	Diagnosis
S01.03XA	Puncture wound without foreign body of scalp, initial encounter	ICD-10-CM	Diagnosis
S01.04XA	Puncture wound with foreign body of scalp, initial encounter	ICD-10-CM	Diagnosis
S01.05XA	Open bite of scalp, initial encounter	ICD-10-CM	Diagnosis
S02.0XXA	Fracture of vault of skull, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.0XXB	Fracture of vault of skull, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.101A	Fracture of base of skull, right side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.101B	Fracture of base of skull, right side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.102A	Fracture of base of skull, left side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.102B	Fracture of base of skull, left side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.109A	Fracture of base of skull, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.109B	Fracture of base of skull, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.110A	Type I occipital condyle fracture, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.110B	Type I occipital condyle fracture, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.111A	Type II occipital condyle fracture, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.111B	Type II occipital condyle fracture, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.112A	Type III occipital condyle fracture, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.112B	Type III occipital condyle fracture, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.113A	Unspecified occipital condyle fracture, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.113B	Unspecified occipital condyle fracture, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.118A	Other fracture of occiput, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.118B	Other fracture of occiput, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.119A	Unspecified fracture of occiput, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.119B	Unspecified fracture of occiput, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.11AA	Type I occipital condyle fracture, right side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.11AB	Type I occipital condyle fracture, right side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.11BA	Type I occipital condyle fracture, left side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.11BB	Type I occipital condyle fracture, left side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.11CA	Type II occipital condyle fracture, right side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.11CB	Type II occipital condyle fracture, right side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.11DA	Type II occipital condyle fracture, left side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.11DB	Type II occipital condyle fracture, left side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.11EA	Type III occipital condyle fracture, right side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.11EB	Type III occipital condyle fracture, right side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.11FA	Type III occipital condyle fracture, left side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.11FB	Type III occipital condyle fracture, left side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.11GA	Other fracture of occiput, right side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.11GB	Other fracture of occiput, right side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.11HA	Other fracture of occiput, left side, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S02.11HB	Other fracture of occiput, left side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.19XA	Other fracture of base of skull, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.19XB	Other fracture of base of skull, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.2XXA	Fracture of nasal bones, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.2XXB	Fracture of nasal bones, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.30XA	Fracture of orbital floor, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.30XB	Fracture of orbital floor, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.31XA	Fracture of orbital floor, right side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.31XB	Fracture of orbital floor, right side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.32XA	Fracture of orbital floor, left side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.32XB	Fracture of orbital floor, left side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.400A	Malar fracture, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.400B	Malar fracture, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.401A	Maxillary fracture, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.401B	Maxillary fracture, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.402A	Zygomatic fracture, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.402B	Zygomatic fracture, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.40AA	Malar fracture, right side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.40AB	Malar fracture, right side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.40BA	Malar fracture, left side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.40BB	Malar fracture, left side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.40CA	Maxillary fracture, right side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.40CB	Maxillary fracture, right side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.40DA	Maxillary fracture, left side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.40DB	Maxillary fracture, left side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.40EA	Zygomatic fracture, right side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.40EB	Zygomatic fracture, right side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.40FA	Zygomatic fracture, left side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.40FB	Zygomatic fracture, left side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.411A	LeFort I fracture, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.411B	LeFort I fracture, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.412A	LeFort II fracture, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.412B	LeFort II fracture, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.413A	LeFort III fracture, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.413B	LeFort III fracture, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.42XA	Fracture of alveolus of maxilla, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.42XB	Fracture of alveolus of maxilla, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.600A	Fracture of unspecified part of body of mandible, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.600B	Fracture of unspecified part of body of mandible, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.601A	Fracture of unspecified part of body of right mandible, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.601B	Fracture of unspecified part of body of right mandible, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.602A	Fracture of unspecified part of body of left mandible, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.602B	Fracture of unspecified part of body of left mandible, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.609A	Fracture of mandible, unspecified, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S02.609B	Fracture of mandible, unspecified, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.610A	Fracture of condylar process of mandible, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.610B	Fracture of condylar process of mandible, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.611A	Fracture of condylar process of right mandible, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.611B	Fracture of condylar process of right mandible, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.612A	Fracture of condylar process of left mandible, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.612B	Fracture of condylar process of left mandible, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.620A	Fracture of subcondylar process of mandible, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.620B	Fracture of subcondylar process of mandible, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.621A	Fracture of subcondylar process of right mandible, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.621B	Fracture of subcondylar process of right mandible, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.622A	Fracture of subcondylar process of left mandible, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.622B	Fracture of subcondylar process of left mandible, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.630A	Fracture of coronoid process of mandible, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.630B	Fracture of coronoid process of mandible, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.631A	Fracture of coronoid process of right mandible, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.631B	Fracture of coronoid process of right mandible, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.632A	Fracture of coronoid process of left mandible, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.632B	Fracture of coronoid process of left mandible, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.640A	Fracture of ramus of mandible, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.640B	Fracture of ramus of mandible, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.641A	Fracture of ramus of right mandible, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.641B	Fracture of ramus of right mandible, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.642A	Fracture of ramus of left mandible, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.642B	Fracture of ramus of left mandible, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.650A	Fracture of angle of mandible, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.650B	Fracture of angle of mandible, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.651A	Fracture of angle of right mandible, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.651B	Fracture of angle of right mandible, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.652A	Fracture of angle of left mandible, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.652B	Fracture of angle of left mandible, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.66XA	Fracture of symphysis of mandible, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.66XB	Fracture of symphysis of mandible, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.670A	Fracture of alveolus of mandible, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.670B	Fracture of alveolus of mandible, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.671A	Fracture of alveolus of right mandible, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.671B	Fracture of alveolus of right mandible, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.672A	Fracture of alveolus of left mandible, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.672B	Fracture of alveolus of left mandible, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.69XA	Fracture of mandible of other specified site, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.69XB	Fracture of mandible of other specified site, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.80XA	Fracture of other specified skull and facial bones, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S02.80XB	Fracture of other specified skull and facial bones, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.81XA	Fracture of other specified skull and facial bones, right side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.81XB	Fracture of other specified skull and facial bones, right side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.82XA	Fracture of other specified skull and facial bones, left side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.82XB	Fracture of other specified skull and facial bones, left side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.91XA	Unspecified fracture of skull, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.91XB	Unspecified fracture of skull, initial encounter for open fracture	ICD-10-CM	Diagnosis
S02.92XA	Unspecified fracture of facial bones, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S02.92XB	Unspecified fracture of facial bones, initial encounter for open fracture	ICD-10-CM	Diagnosis
S06.330A	Contusion and laceration of cerebrum, unspecified, without loss of consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.331A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM	Diagnosis
S06.332A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.333A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.334A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM	Diagnosis
S06.335A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM	Diagnosis
S06.336A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM	Diagnosis
S06.337A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.338A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.339A	Contusion and laceration of cerebrum, unspecified, with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM	Diagnosis
S06.360A	Traumatic hemorrhage of cerebrum, unspecified, without loss of consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.361A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM	Diagnosis
S06.362A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.363A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 1 hours to 5 hours 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.364A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM	Diagnosis
S06.365A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S06.366A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM	Diagnosis
S06.367A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.368A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.369A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM	Diagnosis
S06.4X0A	Epidural hemorrhage without loss of consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.4X1A	Epidural hemorrhage with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM	Diagnosis
S06.4X2A	Epidural hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.4X3A	Epidural hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.4X4A	Epidural hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM	Diagnosis
S06.4X5A	Epidural hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM	Diagnosis
S06.4X6A	Epidural hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM	Diagnosis
S06.4X7A	Epidural hemorrhage with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.4X8A	Epidural hemorrhage with loss of consciousness of any duration with death due to other causes prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.4X9A	Epidural hemorrhage with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM	Diagnosis
S06.5X0A	Traumatic subdural hemorrhage without loss of consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.5X1A	Traumatic subdural hemorrhage with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM	Diagnosis
S06.5X2A	Traumatic subdural hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.5X3A	Traumatic subdural hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.5X4A	Traumatic subdural hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM	Diagnosis
S06.5X5A	Traumatic subdural hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM	Diagnosis
S06.5X6A	Traumatic subdural hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM	Diagnosis
S06.5X7A	Traumatic subdural hemorrhage with loss of consciousness of any duration with death due to brain injury before regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.5X8A	Traumatic subdural hemorrhage with loss of consciousness of any duration with death due to other cause before regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.5X9A	Traumatic subdural hemorrhage with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM	Diagnosis
S06.6X0A	Traumatic subarachnoid hemorrhage without loss of consciousness, initial encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S06.6X1A	Traumatic subarachnoid hemorrhage with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM	Diagnosis
S06.6X2A	Traumatic subarachnoid hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.6X3A	Traumatic subarachnoid hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.6X4A	Traumatic subarachnoid hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM	Diagnosis
S06.6X5A	Traumatic subarachnoid hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM	Diagnosis
S06.6X6A	Traumatic subarachnoid hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM	Diagnosis
S06.6X7A	Traumatic subarachnoid hemorrhage with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.6X8A	Traumatic subarachnoid hemorrhage with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.6X9A	Traumatic subarachnoid hemorrhage with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM	Diagnosis
S06.890A	Other specified intracranial injury without loss of consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.891A	Other specified intracranial injury with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM	Diagnosis
S06.892A	Other specified intracranial injury with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.893A	Other specified intracranial injury with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.894A	Other specified intracranial injury with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM	Diagnosis
S06.895A	Other specified intracranial injury with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM	Diagnosis
S06.896A	Other specified intracranial injury with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM	Diagnosis
S06.897A	Other specified intracranial injury with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.898A	Other specified intracranial injury with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.899A	Other specified intracranial injury with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM	Diagnosis
S06.9X0A	Unspecified intracranial injury without loss of consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.9X1A	Unspecified intracranial injury with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM	Diagnosis
S06.9X2A	Unspecified intracranial injury with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.9X3A	Unspecified intracranial injury with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.9X4A	Unspecified intracranial injury with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM	Diagnosis
S06.9X5A	Unspecified intracranial injury with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM	Diagnosis
S06.9X6A	Unspecified intracranial injury with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S06.9X7A	Unspecified intracranial injury with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.9X8A	Unspecified intracranial injury with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.9X9A	Unspecified intracranial injury with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM	Diagnosis
S07.0XXA	Crushing injury of face, initial encounter	ICD-10-CM	Diagnosis
S07.1XXA	Crushing injury of skull, initial encounter	ICD-10-CM	Diagnosis
S07.8XXA	Crushing injury of other parts of head, initial encounter	ICD-10-CM	Diagnosis
S07.9XXA	Crushing injury of head, part unspecified, initial encounter	ICD-10-CM	Diagnosis
S08.0XXA	Avulsion of scalp, initial encounter	ICD-10-CM	Diagnosis
S12.000A	Unspecified displaced fracture of first cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.000B	Unspecified displaced fracture of first cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.001A	Unspecified nondisplaced fracture of first cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.001B	Unspecified nondisplaced fracture of first cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.01XA	Stable burst fracture of first cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.01XB	Stable burst fracture of first cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.02XA	Unstable burst fracture of first cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.02XB	Unstable burst fracture of first cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.030A	Displaced posterior arch fracture of first cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.030B	Displaced posterior arch fracture of first cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.031A	Nondisplaced posterior arch fracture of first cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.031B	Nondisplaced posterior arch fracture of first cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.040A	Displaced lateral mass fracture of first cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.040B	Displaced lateral mass fracture of first cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.041A	Nondisplaced lateral mass fracture of first cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.041B	Nondisplaced lateral mass fracture of first cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.090A	Other displaced fracture of first cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.090B	Other displaced fracture of first cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.091A	Other nondisplaced fracture of first cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.091B	Other nondisplaced fracture of first cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.100A	Unspecified displaced fracture of second cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.100B	Unspecified displaced fracture of second cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S12.101A	Unspecified nondisplaced fracture of second cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.101B	Unspecified nondisplaced fracture of second cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.110A	Anterior displaced Type II dens fracture, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.110B	Anterior displaced Type II dens fracture, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.111A	Posterior displaced Type II dens fracture, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.111B	Posterior displaced Type II dens fracture, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.112A	Nondisplaced Type II dens fracture, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.112B	Nondisplaced Type II dens fracture, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.120A	Other displaced dens fracture, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.120B	Other displaced dens fracture, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.121A	Other nondisplaced dens fracture, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.121B	Other nondisplaced dens fracture, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.130A	Unspecified traumatic displaced spondylolisthesis of second cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.130B	Unspecified traumatic displaced spondylolisthesis of second cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.131A	Unspecified traumatic nondisplaced spondylolisthesis of second cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.131B	Unspecified traumatic nondisplaced spondylolisthesis of second cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.14XA	Type III traumatic spondylolisthesis of second cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.14XB	Type III traumatic spondylolisthesis of second cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.150A	Other traumatic displaced spondylolisthesis of second cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.150B	Other traumatic displaced spondylolisthesis of second cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.151A	Other traumatic nondisplaced spondylolisthesis of second cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.151B	Other traumatic nondisplaced spondylolisthesis of second cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.190A	Other displaced fracture of second cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.190B	Other displaced fracture of second cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.191A	Other nondisplaced fracture of second cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.191B	Other nondisplaced fracture of second cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.200A	Unspecified displaced fracture of third cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.200B	Unspecified displaced fracture of third cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.201A	Unspecified nondisplaced fracture of third cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.201B	Unspecified nondisplaced fracture of third cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S12.230A	Unspecified traumatic displaced spondylolisthesis of third cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.230B	Unspecified traumatic displaced spondylolisthesis of third cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.231A	Unspecified traumatic nondisplaced spondylolisthesis of third cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.231B	Unspecified traumatic nondisplaced spondylolisthesis of third cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.24XA	Type III traumatic spondylolisthesis of third cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.24XB	Type III traumatic spondylolisthesis of third cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.250A	Other traumatic displaced spondylolisthesis of third cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.250B	Other traumatic displaced spondylolisthesis of third cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.251A	Other traumatic nondisplaced spondylolisthesis of third cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.251B	Other traumatic nondisplaced spondylolisthesis of third cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.290A	Other displaced fracture of third cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.290B	Other displaced fracture of third cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.291A	Other nondisplaced fracture of third cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.291B	Other nondisplaced fracture of third cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.300A	Unspecified displaced fracture of fourth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.300B	Unspecified displaced fracture of fourth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.301A	Unspecified nondisplaced fracture of fourth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.301B	Unspecified nondisplaced fracture of fourth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.330A	Unspecified traumatic displaced spondylolisthesis of fourth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.330B	Unspecified traumatic displaced spondylolisthesis of fourth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.331A	Unspecified traumatic nondisplaced spondylolisthesis of fourth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.331B	Unspecified traumatic nondisplaced spondylolisthesis of fourth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.34XA	Type III traumatic spondylolisthesis of fourth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.34XB	Type III traumatic spondylolisthesis of fourth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.350A	Other traumatic displaced spondylolisthesis of fourth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S12.350B	Other traumatic displaced spondylolisthesis of fourth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.351A	Other traumatic nondisplaced spondylolisthesis of fourth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.351B	Other traumatic nondisplaced spondylolisthesis of fourth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.390A	Other displaced fracture of fourth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.390B	Other displaced fracture of fourth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.391A	Other nondisplaced fracture of fourth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.391B	Other nondisplaced fracture of fourth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.400A	Unspecified displaced fracture of fifth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.400B	Unspecified displaced fracture of fifth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.401A	Unspecified nondisplaced fracture of fifth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.401B	Unspecified nondisplaced fracture of fifth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.430A	Unspecified traumatic displaced spondylolisthesis of fifth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.430B	Unspecified traumatic displaced spondylolisthesis of fifth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.431A	Unspecified traumatic nondisplaced spondylolisthesis of fifth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.431B	Unspecified traumatic nondisplaced spondylolisthesis of fifth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.44XA	Type III traumatic spondylolisthesis of fifth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.44XB	Type III traumatic spondylolisthesis of fifth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.450A	Other traumatic displaced spondylolisthesis of fifth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.450B	Other traumatic displaced spondylolisthesis of fifth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.451A	Other traumatic nondisplaced spondylolisthesis of fifth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.451B	Other traumatic nondisplaced spondylolisthesis of fifth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.490A	Other displaced fracture of fifth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.490B	Other displaced fracture of fifth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.491A	Other nondisplaced fracture of fifth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.491B	Other nondisplaced fracture of fifth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.500A	Unspecified displaced fracture of sixth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S12.500B	Unspecified displaced fracture of sixth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.501A	Unspecified nondisplaced fracture of sixth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.501B	Unspecified nondisplaced fracture of sixth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.530A	Unspecified traumatic displaced spondylolisthesis of sixth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.530B	Unspecified traumatic displaced spondylolisthesis of sixth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.531A	Unspecified traumatic nondisplaced spondylolisthesis of sixth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.531B	Unspecified traumatic nondisplaced spondylolisthesis of sixth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.54XA	Type III traumatic spondylolisthesis of sixth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.54XB	Type III traumatic spondylolisthesis of sixth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.550A	Other traumatic displaced spondylolisthesis of sixth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.550B	Other traumatic displaced spondylolisthesis of sixth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.551A	Other traumatic nondisplaced spondylolisthesis of sixth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.551B	Other traumatic nondisplaced spondylolisthesis of sixth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.590A	Other displaced fracture of sixth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.590B	Other displaced fracture of sixth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.591A	Other nondisplaced fracture of sixth cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.591B	Other nondisplaced fracture of sixth cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.600A	Unspecified displaced fracture of seventh cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.600B	Unspecified displaced fracture of seventh cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.601A	Unspecified nondisplaced fracture of seventh cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.601B	Unspecified nondisplaced fracture of seventh cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.630A	Unspecified traumatic displaced spondylolisthesis of seventh cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.630B	Unspecified traumatic displaced spondylolisthesis of seventh cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.631A	Unspecified traumatic nondisplaced spondylolisthesis of seventh cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.631B	Unspecified traumatic nondisplaced spondylolisthesis of seventh cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.64XA	Type III traumatic spondylolisthesis of seventh cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S12.64XB	Type III traumatic spondylolisthesis of seventh cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.650A	Other traumatic displaced spondylolisthesis of seventh cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.650B	Other traumatic displaced spondylolisthesis of seventh cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.651A	Other traumatic nondisplaced spondylolisthesis of seventh cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.651B	Other traumatic nondisplaced spondylolisthesis of seventh cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.690A	Other displaced fracture of seventh cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.690B	Other displaced fracture of seventh cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.691A	Other nondisplaced fracture of seventh cervical vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S12.691B	Other nondisplaced fracture of seventh cervical vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S12.8XXA	Fracture of other parts of neck, initial encounter	ICD-10-CM	Diagnosis
S12.9XXA	Fracture of neck, unspecified, initial encounter	ICD-10-CM	Diagnosis
S14.101A	Unspecified injury at C1 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.102A	Unspecified injury at C2 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.103A	Unspecified injury at C3 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.104A	Unspecified injury at C4 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.105A	Unspecified injury at C5 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.106A	Unspecified injury at C6 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.107A	Unspecified injury at C7 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.109A	Unspecified injury at unspecified level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.111A	Complete lesion at C1 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.112A	Complete lesion at C2 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.113A	Complete lesion at C3 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.114A	Complete lesion at C4 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.115A	Complete lesion at C5 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.116A	Complete lesion at C6 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.117A	Complete lesion at C7 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.121A	Central cord syndrome at C1 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.122A	Central cord syndrome at C2 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.123A	Central cord syndrome at C3 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.124A	Central cord syndrome at C4 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.125A	Central cord syndrome at C5 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.126A	Central cord syndrome at C6 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.127A	Central cord syndrome at C7 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.131A	Anterior cord syndrome at C1 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.132A	Anterior cord syndrome at C2 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.133A	Anterior cord syndrome at C3 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.134A	Anterior cord syndrome at C4 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.135A	Anterior cord syndrome at C5 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.136A	Anterior cord syndrome at C6 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.137A	Anterior cord syndrome at C7 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.151A	Other incomplete lesion at C1 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S14.152A	Other incomplete lesion at C2 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.153A	Other incomplete lesion at C3 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.154A	Other incomplete lesion at C4 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.155A	Other incomplete lesion at C5 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.156A	Other incomplete lesion at C6 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S14.157A	Other incomplete lesion at C7 level of cervical spinal cord, initial encounter	ICD-10-CM	Diagnosis
S17.0XXA	Crushing injury of larynx and trachea, initial encounter	ICD-10-CM	Diagnosis
S17.8XXA	Crushing injury of other specified parts of neck, initial encounter	ICD-10-CM	Diagnosis
S17.9XXA	Crushing injury of neck, part unspecified, initial encounter	ICD-10-CM	Diagnosis
S21.101A	Unspecified open wound of right front wall of thorax without penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.102A	Unspecified open wound of left front wall of thorax without penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.109A	Unspecified open wound of unspecified front wall of thorax without penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.111A	Laceration without foreign body of right front wall of thorax without penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.112A	Laceration without foreign body of left front wall of thorax without penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.119A	Laceration without foreign body of unspecified front wall of thorax without penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.121A	Laceration with foreign body of right front wall of thorax without penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.122A	Laceration with foreign body of left front wall of thorax without penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.129A	Laceration with foreign body of unspecified front wall of thorax without penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.131A	Puncture wound without foreign body of right front wall of thorax without penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.132A	Puncture wound without foreign body of left front wall of thorax without penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.139A	Puncture wound without foreign body of unspecified front wall of thorax without penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.141A	Puncture wound with foreign body of right front wall of thorax without penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.142A	Puncture wound with foreign body of left front wall of thorax without penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.149A	Puncture wound with foreign body of unspecified front wall of thorax without penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.151A	Open bite of right front wall of thorax without penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.152A	Open bite of left front wall of thorax without penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.159A	Open bite of unspecified front wall of thorax without penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.301A	Unspecified open wound of right front wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S21.302A	Unspecified open wound of left front wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.309A	Unspecified open wound of unspecified front wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.311A	Laceration without foreign body of right front wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.312A	Laceration without foreign body of left front wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.319A	Laceration without foreign body of unspecified front wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.321A	Laceration with foreign body of right front wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.322A	Laceration with foreign body of left front wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.329A	Laceration with foreign body of unspecified front wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.331A	Puncture wound without foreign body of right front wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.332A	Puncture wound without foreign body of left front wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.339A	Puncture wound without foreign body of unspecified front wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.341A	Puncture wound with foreign body of right front wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.342A	Puncture wound with foreign body of left front wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.349A	Puncture wound with foreign body of unspecified front wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.351A	Open bite of right front wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.352A	Open bite of left front wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.359A	Open bite of unspecified front wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.401A	Unspecified open wound of right back wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.402A	Unspecified open wound of left back wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.409A	Unspecified open wound of unspecified back wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.411A	Laceration without foreign body of right back wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.412A	Laceration without foreign body of left back wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.419A	Laceration without foreign body of unspecified back wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.421A	Laceration with foreign body of right back wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S21.422A	Laceration with foreign body of left back wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.429A	Laceration with foreign body of unspecified back wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.431A	Puncture wound without foreign body of right back wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.432A	Puncture wound without foreign body of left back wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.439A	Puncture wound without foreign body of unspecified back wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.441A	Puncture wound with foreign body of right back wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.442A	Puncture wound with foreign body of left back wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.449A	Puncture wound with foreign body of unspecified back wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.451A	Open bite of right back wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.452A	Open bite of left back wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.459A	Open bite of unspecified back wall of thorax with penetration into thoracic cavity, initial encounter	ICD-10-CM	Diagnosis
S21.90XA	Unspecified open wound of unspecified part of thorax, initial encounter	ICD-10-CM	Diagnosis
S21.91XA	Laceration without foreign body of unspecified part of thorax, initial encounter	ICD-10-CM	Diagnosis
S21.92XA	Laceration with foreign body of unspecified part of thorax, initial encounter	ICD-10-CM	Diagnosis
S21.93XA	Puncture wound without foreign body of unspecified part of thorax, initial encounter	ICD-10-CM	Diagnosis
S21.94XA	Puncture wound with foreign body of unspecified part of thorax, initial encounter	ICD-10-CM	Diagnosis
S21.95XA	Open bite of unspecified part of thorax, initial encounter	ICD-10-CM	Diagnosis
S22.000A	Wedge compression fracture of unspecified thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.000B	Wedge compression fracture of unspecified thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.001A	Stable burst fracture of unspecified thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.001B	Stable burst fracture of unspecified thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.002A	Unstable burst fracture of unspecified thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.002B	Unstable burst fracture of unspecified thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.008A	Other fracture of unspecified thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.008B	Other fracture of unspecified thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.009A	Unspecified fracture of unspecified thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.009B	Unspecified fracture of unspecified thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.010A	Wedge compression fracture of first thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S22.010B	Wedge compression fracture of first thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.011A	Stable burst fracture of first thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.011B	Stable burst fracture of first thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.012A	Unstable burst fracture of first thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.012B	Unstable burst fracture of first thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.018A	Other fracture of first thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.018B	Other fracture of first thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.019A	Unspecified fracture of first thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.019B	Unspecified fracture of first thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.020A	Wedge compression fracture of second thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.020B	Wedge compression fracture of second thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.021A	Stable burst fracture of second thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.021B	Stable burst fracture of second thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.022A	Unstable burst fracture of second thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.022B	Unstable burst fracture of second thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.028A	Other fracture of second thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.028B	Other fracture of second thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.029A	Unspecified fracture of second thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.029B	Unspecified fracture of second thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.030A	Wedge compression fracture of third thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.030B	Wedge compression fracture of third thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.031A	Stable burst fracture of third thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.031B	Stable burst fracture of third thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.032A	Unstable burst fracture of third thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.032B	Unstable burst fracture of third thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.038A	Other fracture of third thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.038B	Other fracture of third thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.039A	Unspecified fracture of third thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.039B	Unspecified fracture of third thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.040A	Wedge compression fracture of fourth thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.040B	Wedge compression fracture of fourth thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.041A	Stable burst fracture of fourth thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.041B	Stable burst fracture of fourth thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.042A	Unstable burst fracture of fourth thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.042B	Unstable burst fracture of fourth thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.048A	Other fracture of fourth thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.048B	Other fracture of fourth thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.049A	Unspecified fracture of fourth thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.049B	Unspecified fracture of fourth thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.050A	Wedge compression fracture of T5-T6 vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.050B	Wedge compression fracture of T5-T6 vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.051A	Stable burst fracture of T5-T6 vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S22.051B	Stable burst fracture of T5-T6 vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.052A	Unstable burst fracture of T5-T6 vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.052B	Unstable burst fracture of T5-T6 vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.058A	Other fracture of T5-T6 vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.058B	Other fracture of T5-T6 vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.059A	Unspecified fracture of T5-T6 vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.059B	Unspecified fracture of T5-T6 vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.060A	Wedge compression fracture of T7-T8 vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.060B	Wedge compression fracture of T7-T8 vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.061A	Stable burst fracture of T7-T8 vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.061B	Stable burst fracture of T7-T8 vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.062A	Unstable burst fracture of T7-T8 vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.062B	Unstable burst fracture of T7-T8 vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.068A	Other fracture of T7-T8 thoracic vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.068B	Other fracture of T7-T8 thoracic vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.069A	Unspecified fracture of T7-T8 vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.069B	Unspecified fracture of T7-T8 vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.070A	Wedge compression fracture of T9-T10 vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.070B	Wedge compression fracture of T9-T10 vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.071A	Stable burst fracture of T9-T10 vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.071B	Stable burst fracture of T9-T10 vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.072A	Unstable burst fracture of T9-T10 vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.072B	Unstable burst fracture of T9-T10 vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.078A	Other fracture of T9-T10 vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.078B	Other fracture of T9-T10 vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.079A	Unspecified fracture of T9-T10 vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.079B	Unspecified fracture of T9-T10 vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.080A	Wedge compression fracture of T11-T12 vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.080B	Wedge compression fracture of T11-T12 vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.081A	Stable burst fracture of T11-T12 vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.081B	Stable burst fracture of T11-T12 vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.082A	Unstable burst fracture of T11-T12 vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.082B	Unstable burst fracture of T11-T12 vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.088A	Other fracture of T11-T12 vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.088B	Other fracture of T11-T12 vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.089A	Unspecified fracture of T11-T12 vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.089B	Unspecified fracture of T11-T12 vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.20XA	Unspecified fracture of sternum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.20XB	Unspecified fracture of sternum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.21XA	Fracture of manubrium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.21XB	Fracture of manubrium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.22XA	Fracture of body of sternum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.22XB	Fracture of body of sternum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.23XA	Sternal manubrial dissociation, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.23XB	Sternal manubrial dissociation, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.24XA	Fracture of xiphoid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.24XB	Fracture of xiphoid process, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.31XA	Fracture of one rib, right side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.31XB	Fracture of one rib, right side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.32XA	Fracture of one rib, left side, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S22.32XB	Fracture of one rib, left side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.39XA	Fracture of one rib, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.39XB	Fracture of one rib, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.41XA	Multiple fractures of ribs, right side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.41XB	Multiple fractures of ribs, right side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.42XA	Multiple fractures of ribs, left side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.42XB	Multiple fractures of ribs, left side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.43XA	Multiple fractures of ribs, bilateral, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.43XB	Multiple fractures of ribs, bilateral, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.49XA	Multiple fractures of ribs, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.49XB	Multiple fractures of ribs, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.5XXA	Flail chest, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.5XXB	Flail chest, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.9XXA	Fracture of bony thorax, part unspecified, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.9XXB	Fracture of bony thorax, part unspecified, initial encounter for open fracture	ICD-10-CM	Diagnosis
S24.101A	Unspecified injury at T1 level of thoracic spinal cord, initial encounter	ICD-10-CM	Diagnosis
S24.102A	Unspecified injury at T2-T6 level of thoracic spinal cord, initial encounter	ICD-10-CM	Diagnosis
S24.103A	Unspecified injury at T7-T10 level of thoracic spinal cord, initial encounter	ICD-10-CM	Diagnosis
S24.104A	Unspecified injury at T11-T12 level of thoracic spinal cord, initial encounter	ICD-10-CM	Diagnosis
S24.109A	Unspecified injury at unspecified level of thoracic spinal cord, initial encounter	ICD-10-CM	Diagnosis
S24.111A	Complete lesion at T1 level of thoracic spinal cord, initial encounter	ICD-10-CM	Diagnosis
S24.112A	Complete lesion at T2-T6 level of thoracic spinal cord, initial encounter	ICD-10-CM	Diagnosis
S24.113A	Complete lesion at T7-T10 level of thoracic spinal cord, initial encounter	ICD-10-CM	Diagnosis
S24.114A	Complete lesion at T11-T12 level of thoracic spinal cord, initial encounter	ICD-10-CM	Diagnosis
S24.131A	Anterior cord syndrome at T1 level of thoracic spinal cord, initial encounter	ICD-10-CM	Diagnosis
S24.132A	Anterior cord syndrome at T2-T6 level of thoracic spinal cord, initial encounter	ICD-10-CM	Diagnosis
S24.133A	Anterior cord syndrome at T7-T10 level of thoracic spinal cord, initial encounter	ICD-10-CM	Diagnosis
S24.134A	Anterior cord syndrome at T11-T12 level of thoracic spinal cord, initial encounter	ICD-10-CM	Diagnosis
S24.151A	Other incomplete lesion at T1 level of thoracic spinal cord, initial encounter	ICD-10-CM	Diagnosis
S24.152A	Other incomplete lesion at T2-T6 level of thoracic spinal cord, initial encounter	ICD-10-CM	Diagnosis
S24.153A	Other incomplete lesion at T7-T10 level of thoracic spinal cord, initial encounter	ICD-10-CM	Diagnosis
S24.154A	Other incomplete lesion at T11-T12 level of thoracic spinal cord, initial encounter	ICD-10-CM	Diagnosis
S27.0XXA	Traumatic pneumothorax, initial encounter	ICD-10-CM	Diagnosis
S27.1XXA	Traumatic hemothorax, initial encounter	ICD-10-CM	Diagnosis
S27.2XXA	Traumatic hemopneumothorax, initial encounter	ICD-10-CM	Diagnosis
S27.802A	Contusion of diaphragm, initial encounter	ICD-10-CM	Diagnosis
S27.803A	Laceration of diaphragm, initial encounter	ICD-10-CM	Diagnosis
S27.808A	Other injury of diaphragm, initial encounter	ICD-10-CM	Diagnosis
S27.809A	Unspecified injury of diaphragm, initial encounter	ICD-10-CM	Diagnosis
S27.9XXA	Injury of unspecified intrathoracic organ, initial encounter	ICD-10-CM	Diagnosis
S28.0XXA	Crushed chest, initial encounter	ICD-10-CM	Diagnosis
S28.1XXA	Traumatic amputation (partial) of part of thorax, except breast, initial encounter	ICD-10-CM	Diagnosis
S29.021A	Laceration of muscle and tendon of front wall of thorax, initial encounter	ICD-10-CM	Diagnosis
S29.029A	Laceration of muscle and tendon of unspecified wall of thorax, initial encounter	ICD-10-CM	Diagnosis
S31.001A	Unspecified open wound of lower back and pelvis with penetration into retroperitoneum, initial encounter	ICD-10-CM	Diagnosis
S31.609A	Unspecified open wound of abdominal wall, unspecified quadrant with penetration into peritoneal cavity, initial encounter	ICD-10-CM	Diagnosis
S32.000A	Wedge compression fracture of unspecified lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S32.000B	Wedge compression fracture of unspecified lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.001A	Stable burst fracture of unspecified lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.001B	Stable burst fracture of unspecified lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.002A	Unstable burst fracture of unspecified lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.002B	Unstable burst fracture of unspecified lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.008A	Other fracture of unspecified lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.008B	Other fracture of unspecified lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.009A	Unspecified fracture of unspecified lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.009B	Unspecified fracture of unspecified lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.010A	Wedge compression fracture of first lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.010B	Wedge compression fracture of first lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.011A	Stable burst fracture of first lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.011B	Stable burst fracture of first lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.012A	Unstable burst fracture of first lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.012B	Unstable burst fracture of first lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.018A	Other fracture of first lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.018B	Other fracture of first lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.019A	Unspecified fracture of first lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.019B	Unspecified fracture of first lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.020A	Wedge compression fracture of second lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.020B	Wedge compression fracture of second lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.021A	Stable burst fracture of second lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.021B	Stable burst fracture of second lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.022A	Unstable burst fracture of second lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.022B	Unstable burst fracture of second lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.028A	Other fracture of second lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.028B	Other fracture of second lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.029A	Unspecified fracture of second lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.029B	Unspecified fracture of second lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.030A	Wedge compression fracture of third lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.030B	Wedge compression fracture of third lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.031A	Stable burst fracture of third lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.031B	Stable burst fracture of third lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.032A	Unstable burst fracture of third lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.032B	Unstable burst fracture of third lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.038A	Other fracture of third lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.038B	Other fracture of third lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.039A	Unspecified fracture of third lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.039B	Unspecified fracture of third lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S32.040A	Wedge compression fracture of fourth lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.040B	Wedge compression fracture of fourth lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.041A	Stable burst fracture of fourth lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.041B	Stable burst fracture of fourth lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.042A	Unstable burst fracture of fourth lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.042B	Unstable burst fracture of fourth lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.048A	Other fracture of fourth lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.048B	Other fracture of fourth lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.049A	Unspecified fracture of fourth lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.049B	Unspecified fracture of fourth lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.050A	Wedge compression fracture of fifth lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.050B	Wedge compression fracture of fifth lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.051A	Stable burst fracture of fifth lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.051B	Stable burst fracture of fifth lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.052A	Unstable burst fracture of fifth lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.052B	Unstable burst fracture of fifth lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.058A	Other fracture of fifth lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.058B	Other fracture of fifth lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.059A	Unspecified fracture of fifth lumbar vertebra, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.059B	Unspecified fracture of fifth lumbar vertebra, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.10XA	Unspecified fracture of sacrum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.10XB	Unspecified fracture of sacrum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.110A	Nondisplaced Zone I fracture of sacrum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.110B	Nondisplaced Zone I fracture of sacrum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.111A	Minimally displaced Zone I fracture of sacrum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.111B	Minimally displaced Zone I fracture of sacrum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.112A	Severely displaced Zone I fracture of sacrum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.112B	Severely displaced Zone I fracture of sacrum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.119A	Unspecified Zone I fracture of sacrum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.119B	Unspecified Zone I fracture of sacrum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.120A	Nondisplaced Zone II fracture of sacrum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.120B	Nondisplaced Zone II fracture of sacrum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.121A	Minimally displaced Zone II fracture of sacrum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.121B	Minimally displaced Zone II fracture of sacrum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.122A	Severely displaced Zone II fracture of sacrum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.122B	Severely displaced Zone II fracture of sacrum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.129A	Unspecified Zone II fracture of sacrum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.129B	Unspecified Zone II fracture of sacrum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.130A	Nondisplaced Zone III fracture of sacrum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.130B	Nondisplaced Zone III fracture of sacrum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.131A	Minimally displaced Zone III fracture of sacrum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.131B	Minimally displaced Zone III fracture of sacrum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.132A	Severely displaced Zone III fracture of sacrum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.132B	Severely displaced Zone III fracture of sacrum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.139A	Unspecified Zone III fracture of sacrum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.139B	Unspecified Zone III fracture of sacrum, initial encounter for open fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S32.14XA	Type 1 fracture of sacrum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.14XB	Type 1 fracture of sacrum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.15XA	Type 2 fracture of sacrum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.15XB	Type 2 fracture of sacrum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.16XA	Type 3 fracture of sacrum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.16XB	Type 3 fracture of sacrum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.17XA	Type 4 fracture of sacrum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.17XB	Type 4 fracture of sacrum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.19XA	Other fracture of sacrum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.19XB	Other fracture of sacrum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.2XXA	Fracture of coccyx, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.2XXB	Fracture of coccyx, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.301A	Unspecified fracture of right ilium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.301B	Unspecified fracture of right ilium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.302A	Unspecified fracture of left ilium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.302B	Unspecified fracture of left ilium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.309A	Unspecified fracture of unspecified ilium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.309B	Unspecified fracture of unspecified ilium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.311A	Displaced avulsion fracture of right ilium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.311B	Displaced avulsion fracture of right ilium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.312A	Displaced avulsion fracture of left ilium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.312B	Displaced avulsion fracture of left ilium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.313A	Displaced avulsion fracture of unspecified ilium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.313B	Displaced avulsion fracture of unspecified ilium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.314A	Nondisplaced avulsion fracture of right ilium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.314B	Nondisplaced avulsion fracture of right ilium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.315A	Nondisplaced avulsion fracture of left ilium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.315B	Nondisplaced avulsion fracture of left ilium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.316A	Nondisplaced avulsion fracture of unspecified ilium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.316B	Nondisplaced avulsion fracture of unspecified ilium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.391A	Other fracture of right ilium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.391B	Other fracture of right ilium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.392A	Other fracture of left ilium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.392B	Other fracture of left ilium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.399A	Other fracture of unspecified ilium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.399B	Other fracture of unspecified ilium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.401A	Unspecified fracture of right acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.401B	Unspecified fracture of right acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.402A	Unspecified fracture of left acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.402B	Unspecified fracture of left acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.409A	Unspecified fracture of unspecified acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.409B	Unspecified fracture of unspecified acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.411A	Displaced fracture of anterior wall of right acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.411B	Displaced fracture of anterior wall of right acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.412A	Displaced fracture of anterior wall of left acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S32.412B	Displaced fracture of anterior wall of left acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.413A	Displaced fracture of anterior wall of unspecified acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.413B	Displaced fracture of anterior wall of unspecified acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.414A	Nondisplaced fracture of anterior wall of right acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.414B	Nondisplaced fracture of anterior wall of right acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.415A	Nondisplaced fracture of anterior wall of left acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.415B	Nondisplaced fracture of anterior wall of left acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.416A	Nondisplaced fracture of anterior wall of unspecified acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.416B	Nondisplaced fracture of anterior wall of unspecified acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.421A	Displaced fracture of posterior wall of right acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.421B	Displaced fracture of posterior wall of right acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.422A	Displaced fracture of posterior wall of left acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.422B	Displaced fracture of posterior wall of left acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.423A	Displaced fracture of posterior wall of unspecified acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.423B	Displaced fracture of posterior wall of unspecified acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.424A	Nondisplaced fracture of posterior wall of right acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.424B	Nondisplaced fracture of posterior wall of right acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.425A	Nondisplaced fracture of posterior wall of left acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.425B	Nondisplaced fracture of posterior wall of left acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.426A	Nondisplaced fracture of posterior wall of unspecified acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.426B	Nondisplaced fracture of posterior wall of unspecified acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.431A	Displaced fracture of anterior column [iliopubic] of right acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.431B	Displaced fracture of anterior column [iliopubic] of right acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.432A	Displaced fracture of anterior column [iliopubic] of left acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.432B	Displaced fracture of anterior column [iliopubic] of left acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S32.433A	Displaced fracture of anterior column [iliopubic] of unspecified acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.433B	Displaced fracture of anterior column [iliopubic] of unspecified acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.434A	Nondisplaced fracture of anterior column [iliopubic] of right acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.434B	Nondisplaced fracture of anterior column [iliopubic] of right acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.435A	Nondisplaced fracture of anterior column [iliopubic] of left acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.435B	Nondisplaced fracture of anterior column [iliopubic] of left acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.436A	Nondisplaced fracture of anterior column [iliopubic] of unspecified acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.436B	Nondisplaced fracture of anterior column [iliopubic] of unspecified acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.441A	Displaced fracture of posterior column [ilioischial] of right acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.441B	Displaced fracture of posterior column [ilioischial] of right acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.442A	Displaced fracture of posterior column [ilioischial] of left acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.442B	Displaced fracture of posterior column [ilioischial] of left acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.443A	Displaced fracture of posterior column [ilioischial] of unspecified acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.443B	Displaced fracture of posterior column [ilioischial] of unspecified acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.444A	Nondisplaced fracture of posterior column [ilioischial] of right acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.444B	Nondisplaced fracture of posterior column [ilioischial] of right acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.445A	Nondisplaced fracture of posterior column [ilioischial] of left acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.445B	Nondisplaced fracture of posterior column [ilioischial] of left acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.446A	Nondisplaced fracture of posterior column [ilioischial] of unspecified acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.446B	Nondisplaced fracture of posterior column [ilioischial] of unspecified acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.451A	Displaced transverse fracture of right acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.451B	Displaced transverse fracture of right acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.452A	Displaced transverse fracture of left acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.452B	Displaced transverse fracture of left acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.453A	Displaced transverse fracture of unspecified acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.453B	Displaced transverse fracture of unspecified acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S32.454A	Nondisplaced transverse fracture of right acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.454B	Nondisplaced transverse fracture of right acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.455A	Nondisplaced transverse fracture of left acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.455B	Nondisplaced transverse fracture of left acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.456A	Nondisplaced transverse fracture of unspecified acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.456B	Nondisplaced transverse fracture of unspecified acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.461A	Displaced associated transverse-posterior fracture of right acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.461B	Displaced associated transverse-posterior fracture of right acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.462A	Displaced associated transverse-posterior fracture of left acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.462B	Displaced associated transverse-posterior fracture of left acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.463A	Displaced associated transverse-posterior fracture of unspecified acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.463B	Displaced associated transverse-posterior fracture of unspecified acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.464A	Nondisplaced associated transverse-posterior fracture of right acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.464B	Nondisplaced associated transverse-posterior fracture of right acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.465A	Nondisplaced associated transverse-posterior fracture of left acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.465B	Nondisplaced associated transverse-posterior fracture of left acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.466A	Nondisplaced associated transverse-posterior fracture of unspecified acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.466B	Nondisplaced associated transverse-posterior fracture of unspecified acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.471A	Displaced fracture of medial wall of right acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.471B	Displaced fracture of medial wall of right acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.472A	Displaced fracture of medial wall of left acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.472B	Displaced fracture of medial wall of left acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.473A	Displaced fracture of medial wall of unspecified acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.473B	Displaced fracture of medial wall of unspecified acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S32.474A	Nondisplaced fracture of medial wall of right acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.474B	Nondisplaced fracture of medial wall of right acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.475A	Nondisplaced fracture of medial wall of left acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.475B	Nondisplaced fracture of medial wall of left acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.476A	Nondisplaced fracture of medial wall of unspecified acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.476B	Nondisplaced fracture of medial wall of unspecified acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.481A	Displaced dome fracture of right acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.481B	Displaced dome fracture of right acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.482A	Displaced dome fracture of left acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.482B	Displaced dome fracture of left acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.483A	Displaced dome fracture of unspecified acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.483B	Displaced dome fracture of unspecified acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.484A	Nondisplaced dome fracture of right acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.484B	Nondisplaced dome fracture of right acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.485A	Nondisplaced dome fracture of left acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.485B	Nondisplaced dome fracture of left acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.486A	Nondisplaced dome fracture of unspecified acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.486B	Nondisplaced dome fracture of unspecified acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.491A	Other specified fracture of right acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.491B	Other specified fracture of right acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.492A	Other specified fracture of left acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.492B	Other specified fracture of left acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.499A	Other specified fracture of unspecified acetabulum, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.499B	Other specified fracture of unspecified acetabulum, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.501A	Unspecified fracture of right pubis, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.501B	Unspecified fracture of right pubis, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.502A	Unspecified fracture of left pubis, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.502B	Unspecified fracture of left pubis, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.509A	Unspecified fracture of unspecified pubis, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.509B	Unspecified fracture of unspecified pubis, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.511A	Fracture of superior rim of right pubis, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.511B	Fracture of superior rim of right pubis, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.512A	Fracture of superior rim of left pubis, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.512B	Fracture of superior rim of left pubis, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.519A	Fracture of superior rim of unspecified pubis, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.519B	Fracture of superior rim of unspecified pubis, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.591A	Other specified fracture of right pubis, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.591B	Other specified fracture of right pubis, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.592A	Other specified fracture of left pubis, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.592B	Other specified fracture of left pubis, initial encounter for open fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S32.599A	Other specified fracture of unspecified pubis, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.599B	Other specified fracture of unspecified pubis, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.601A	Unspecified fracture of right ischium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.601B	Unspecified fracture of right ischium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.602A	Unspecified fracture of left ischium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.602B	Unspecified fracture of left ischium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.609A	Unspecified fracture of unspecified ischium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.609B	Unspecified fracture of unspecified ischium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.611A	Displaced avulsion fracture of right ischium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.611B	Displaced avulsion fracture of right ischium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.612A	Displaced avulsion fracture of left ischium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.612B	Displaced avulsion fracture of left ischium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.613A	Displaced avulsion fracture of unspecified ischium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.613B	Displaced avulsion fracture of unspecified ischium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.614A	Nondisplaced avulsion fracture of right ischium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.614B	Nondisplaced avulsion fracture of right ischium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.615A	Nondisplaced avulsion fracture of left ischium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.615B	Nondisplaced avulsion fracture of left ischium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.616A	Nondisplaced avulsion fracture of unspecified ischium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.616B	Nondisplaced avulsion fracture of unspecified ischium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.691A	Other specified fracture of right ischium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.691B	Other specified fracture of right ischium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.692A	Other specified fracture of left ischium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.692B	Other specified fracture of left ischium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.699A	Other specified fracture of unspecified ischium, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.699B	Other specified fracture of unspecified ischium, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.810A	Multiple fractures of pelvis with stable disruption of pelvic ring, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.810B	Multiple fractures of pelvis with stable disruption of pelvic ring, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.811A	Multiple fractures of pelvis with unstable disruption of pelvic ring, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.811B	Multiple fractures of pelvis with unstable disruption of pelvic ring, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.82XA	Multiple fractures of pelvis without disruption of pelvic ring, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.82XB	Multiple fractures of pelvis without disruption of pelvic ring, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.89XA	Fracture of other parts of pelvis, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.89XB	Fracture of other parts of pelvis, initial encounter for open fracture	ICD-10-CM	Diagnosis
S32.9XXA	Fracture of unspecified parts of lumbosacral spine and pelvis, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S32.9XXB	Fracture of unspecified parts of lumbosacral spine and pelvis, initial encounter for open fracture	ICD-10-CM	Diagnosis
S34.101A	Unspecified injury to L1 level of lumbar spinal cord, initial encounter	ICD-10-CM	Diagnosis
S34.102A	Unspecified injury to L2 level of lumbar spinal cord, initial encounter	ICD-10-CM	Diagnosis
S34.103A	Unspecified injury to L3 level of lumbar spinal cord, initial encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S34.104A	Unspecified injury to L4 level of lumbar spinal cord, initial encounter	ICD-10-CM	Diagnosis
S34.105A	Unspecified injury to L5 level of lumbar spinal cord, initial encounter	ICD-10-CM	Diagnosis
S34.109A	Unspecified injury to unspecified level of lumbar spinal cord, initial encounter	ICD-10-CM	Diagnosis
S34.111A	Complete lesion of L1 level of lumbar spinal cord, initial encounter	ICD-10-CM	Diagnosis
S34.112A	Complete lesion of L2 level of lumbar spinal cord, initial encounter	ICD-10-CM	Diagnosis
S34.113A	Complete lesion of L3 level of lumbar spinal cord, initial encounter	ICD-10-CM	Diagnosis
S34.114A	Complete lesion of L4 level of lumbar spinal cord, initial encounter	ICD-10-CM	Diagnosis
S34.115A	Complete lesion of L5 level of lumbar spinal cord, initial encounter	ICD-10-CM	Diagnosis
S34.119A	Complete lesion of unspecified level of lumbar spinal cord, initial encounter	ICD-10-CM	Diagnosis
S34.121A	Incomplete lesion of L1 level of lumbar spinal cord, initial encounter	ICD-10-CM	Diagnosis
S34.122A	Incomplete lesion of L2 level of lumbar spinal cord, initial encounter	ICD-10-CM	Diagnosis
S34.123A	Incomplete lesion of L3 level of lumbar spinal cord, initial encounter	ICD-10-CM	Diagnosis
S34.124A	Incomplete lesion of L4 level of lumbar spinal cord, initial encounter	ICD-10-CM	Diagnosis
S34.125A	Incomplete lesion of L5 level of lumbar spinal cord, initial encounter	ICD-10-CM	Diagnosis
S34.129A	Incomplete lesion of unspecified level of lumbar spinal cord, initial encounter	ICD-10-CM	Diagnosis
S34.131A	Complete lesion of sacral spinal cord, initial encounter	ICD-10-CM	Diagnosis
S34.132A	Incomplete lesion of sacral spinal cord, initial encounter	ICD-10-CM	Diagnosis
S34.139A	Unspecified injury to sacral spinal cord, initial encounter	ICD-10-CM	Diagnosis
S34.3XXA	Injury of cauda equina, initial encounter	ICD-10-CM	Diagnosis
S35.401A	Unspecified injury of right renal artery, initial encounter	ICD-10-CM	Diagnosis
S35.402A	Unspecified injury of left renal artery, initial encounter	ICD-10-CM	Diagnosis
S35.403A	Unspecified injury of unspecified renal artery, initial encounter	ICD-10-CM	Diagnosis
S35.404A	Unspecified injury of right renal vein, initial encounter	ICD-10-CM	Diagnosis
S35.405A	Unspecified injury of left renal vein, initial encounter	ICD-10-CM	Diagnosis
S35.406A	Unspecified injury of unspecified renal vein, initial encounter	ICD-10-CM	Diagnosis
S35.411A	Laceration of right renal artery, initial encounter	ICD-10-CM	Diagnosis
S35.412A	Laceration of left renal artery, initial encounter	ICD-10-CM	Diagnosis
S35.413A	Laceration of unspecified renal artery, initial encounter	ICD-10-CM	Diagnosis
S35.414A	Laceration of right renal vein, initial encounter	ICD-10-CM	Diagnosis
S35.415A	Laceration of left renal vein, initial encounter	ICD-10-CM	Diagnosis
S35.416A	Laceration of unspecified renal vein, initial encounter	ICD-10-CM	Diagnosis
S35.491A	Other specified injury of right renal artery, initial encounter	ICD-10-CM	Diagnosis
S35.492A	Other specified injury of left renal artery, initial encounter	ICD-10-CM	Diagnosis
S35.493A	Other specified injury of unspecified renal artery, initial encounter	ICD-10-CM	Diagnosis
S35.494A	Other specified injury of right renal vein, initial encounter	ICD-10-CM	Diagnosis
S35.495A	Other specified injury of left renal vein, initial encounter	ICD-10-CM	Diagnosis
S35.496A	Other specified injury of unspecified renal vein, initial encounter	ICD-10-CM	Diagnosis
S35.531A	Injury of right uterine artery, initial encounter	ICD-10-CM	Diagnosis
S35.532A	Injury of left uterine artery, initial encounter	ICD-10-CM	Diagnosis
S35.533A	Injury of unspecified uterine artery, initial encounter	ICD-10-CM	Diagnosis
S35.534A	Injury of right uterine vein, initial encounter	ICD-10-CM	Diagnosis
S35.535A	Injury of left uterine vein, initial encounter	ICD-10-CM	Diagnosis
S35.536A	Injury of unspecified uterine vein, initial encounter	ICD-10-CM	Diagnosis
S35.8X1A	Laceration of other blood vessels at abdomen, lower back and pelvis level, initial encounter	ICD-10-CM	Diagnosis
S35.8X8A	Other specified injury of other blood vessels at abdomen, lower back and pelvis level, initial encounter	ICD-10-CM	Diagnosis
S35.8X9A	Unspecified injury of other blood vessels at abdomen, lower back and pelvis level, initial encounter	ICD-10-CM	Diagnosis
S36.00XA	Unspecified injury of spleen, initial encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S36.020A	Minor contusion of spleen, initial encounter	ICD-10-CM	Diagnosis
S36.021A	Major contusion of spleen, initial encounter	ICD-10-CM	Diagnosis
S36.029A	Unspecified contusion of spleen, initial encounter	ICD-10-CM	Diagnosis
S36.030A	Superficial (capsular) laceration of spleen, initial encounter	ICD-10-CM	Diagnosis
S36.031A	Moderate laceration of spleen, initial encounter	ICD-10-CM	Diagnosis
S36.032A	Major laceration of spleen, initial encounter	ICD-10-CM	Diagnosis
S36.09XA	Other injury of spleen, initial encounter	ICD-10-CM	Diagnosis
S36.112A	Contusion of liver, initial encounter	ICD-10-CM	Diagnosis
S36.113A	Laceration of liver, unspecified degree, initial encounter	ICD-10-CM	Diagnosis
S36.114A	Minor laceration of liver, initial encounter	ICD-10-CM	Diagnosis
S36.115A	Moderate laceration of liver, initial encounter	ICD-10-CM	Diagnosis
S36.116A	Major laceration of liver, initial encounter	ICD-10-CM	Diagnosis
S36.118A	Other injury of liver, initial encounter	ICD-10-CM	Diagnosis
S36.119A	Unspecified injury of liver, initial encounter	ICD-10-CM	Diagnosis
S36.200A	Unspecified injury of head of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.201A	Unspecified injury of body of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.202A	Unspecified injury of tail of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.209A	Unspecified injury of unspecified part of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.220A	Contusion of head of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.221A	Contusion of body of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.222A	Contusion of tail of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.229A	Contusion of unspecified part of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.230A	Laceration of head of pancreas, unspecified degree, initial encounter	ICD-10-CM	Diagnosis
S36.231A	Laceration of body of pancreas, unspecified degree, initial encounter	ICD-10-CM	Diagnosis
S36.232A	Laceration of tail of pancreas, unspecified degree, initial encounter	ICD-10-CM	Diagnosis
S36.239A	Laceration of unspecified part of pancreas, unspecified degree, initial encounter	ICD-10-CM	Diagnosis
S36.240A	Minor laceration of head of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.241A	Minor laceration of body of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.242A	Minor laceration of tail of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.249A	Minor laceration of unspecified part of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.250A	Moderate laceration of head of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.251A	Moderate laceration of body of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.252A	Moderate laceration of tail of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.259A	Moderate laceration of unspecified part of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.260A	Major laceration of head of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.261A	Major laceration of body of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.262A	Major laceration of tail of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.269A	Major laceration of unspecified part of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.290A	Other injury of head of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.291A	Other injury of body of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.292A	Other injury of tail of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.299A	Other injury of unspecified part of pancreas, initial encounter	ICD-10-CM	Diagnosis
S36.30XA	Unspecified injury of stomach, initial encounter	ICD-10-CM	Diagnosis
S36.32XA	Contusion of stomach, initial encounter	ICD-10-CM	Diagnosis
S36.33XA	Laceration of stomach, initial encounter	ICD-10-CM	Diagnosis
S36.39XA	Other injury of stomach, initial encounter	ICD-10-CM	Diagnosis
S36.400A	Unspecified injury of duodenum, initial encounter	ICD-10-CM	Diagnosis
S36.408A	Unspecified injury of other part of small intestine, initial encounter	ICD-10-CM	Diagnosis
S36.409A	Unspecified injury of unspecified part of small intestine, initial encounter	ICD-10-CM	Diagnosis
S36.410A	Primary blast injury of duodenum, initial encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S36.418A	Primary blast injury of other part of small intestine, initial encounter	ICD-10-CM	Diagnosis
S36.419A	Primary blast injury of unspecified part of small intestine, initial encounter	ICD-10-CM	Diagnosis
S36.420A	Contusion of duodenum, initial encounter	ICD-10-CM	Diagnosis
S36.428A	Contusion of other part of small intestine, initial encounter	ICD-10-CM	Diagnosis
S36.429A	Contusion of unspecified part of small intestine, initial encounter	ICD-10-CM	Diagnosis
S36.430A	Laceration of duodenum, initial encounter	ICD-10-CM	Diagnosis
S36.438A	Laceration of other part of small intestine, initial encounter	ICD-10-CM	Diagnosis
S36.439A	Laceration of unspecified part of small intestine, initial encounter	ICD-10-CM	Diagnosis
S36.490A	Other injury of duodenum, initial encounter	ICD-10-CM	Diagnosis
S36.498A	Other injury of other part of small intestine, initial encounter	ICD-10-CM	Diagnosis
S36.499A	Other injury of unspecified part of small intestine, initial encounter	ICD-10-CM	Diagnosis
S36.500A	Unspecified injury of ascending [right] colon, initial encounter	ICD-10-CM	Diagnosis
S36.501A	Unspecified injury of transverse colon, initial encounter	ICD-10-CM	Diagnosis
S36.502A	Unspecified injury of descending [left] colon, initial encounter	ICD-10-CM	Diagnosis
S36.503A	Unspecified injury of sigmoid colon, initial encounter	ICD-10-CM	Diagnosis
S36.508A	Unspecified injury of other part of colon, initial encounter	ICD-10-CM	Diagnosis
S36.509A	Unspecified injury of unspecified part of colon, initial encounter	ICD-10-CM	Diagnosis
S36.510A	Primary blast injury of ascending [right] colon, initial encounter	ICD-10-CM	Diagnosis
S36.511A	Primary blast injury of transverse colon, initial encounter	ICD-10-CM	Diagnosis
S36.512A	Primary blast injury of descending [left] colon, initial encounter	ICD-10-CM	Diagnosis
S36.513A	Primary blast injury of sigmoid colon, initial encounter	ICD-10-CM	Diagnosis
S36.518A	Primary blast injury of other part of colon, initial encounter	ICD-10-CM	Diagnosis
S36.519A	Primary blast injury of unspecified part of colon, initial encounter	ICD-10-CM	Diagnosis
S36.520A	Contusion of ascending [right] colon, initial encounter	ICD-10-CM	Diagnosis
S36.521A	Contusion of transverse colon, initial encounter	ICD-10-CM	Diagnosis
S36.522A	Contusion of descending [left] colon, initial encounter	ICD-10-CM	Diagnosis
S36.523A	Contusion of sigmoid colon, initial encounter	ICD-10-CM	Diagnosis
S36.528A	Contusion of other part of colon, initial encounter	ICD-10-CM	Diagnosis
S36.529A	Contusion of unspecified part of colon, initial encounter	ICD-10-CM	Diagnosis
S36.530A	Laceration of ascending [right] colon, initial encounter	ICD-10-CM	Diagnosis
S36.531A	Laceration of transverse colon, initial encounter	ICD-10-CM	Diagnosis
S36.532A	Laceration of descending [left] colon, initial encounter	ICD-10-CM	Diagnosis
S36.533A	Laceration of sigmoid colon, initial encounter	ICD-10-CM	Diagnosis
S36.538A	Laceration of other part of colon, initial encounter	ICD-10-CM	Diagnosis
S36.539A	Laceration of unspecified part of colon, initial encounter	ICD-10-CM	Diagnosis
S36.590A	Other injury of ascending [right] colon, initial encounter	ICD-10-CM	Diagnosis
S36.591A	Other injury of transverse colon, initial encounter	ICD-10-CM	Diagnosis
S36.592A	Other injury of descending [left] colon, initial encounter	ICD-10-CM	Diagnosis
S36.593A	Other injury of sigmoid colon, initial encounter	ICD-10-CM	Diagnosis
S36.598A	Other injury of other part of colon, initial encounter	ICD-10-CM	Diagnosis
S36.599A	Other injury of unspecified part of colon, initial encounter	ICD-10-CM	Diagnosis
S36.60XA	Unspecified injury of rectum, initial encounter	ICD-10-CM	Diagnosis
S36.61XA	Primary blast injury of rectum, initial encounter	ICD-10-CM	Diagnosis
S36.62XA	Contusion of rectum, initial encounter	ICD-10-CM	Diagnosis
S36.63XA	Laceration of rectum, initial encounter	ICD-10-CM	Diagnosis
S36.69XA	Other injury of rectum, initial encounter	ICD-10-CM	Diagnosis
S36.899A	Unspecified injury of other intra-abdominal organs, initial encounter	ICD-10-CM	Diagnosis
S36.90XA	Unspecified injury of unspecified intra-abdominal organ, initial encounter	ICD-10-CM	Diagnosis
S37.001A	Unspecified injury of right kidney, initial encounter	ICD-10-CM	Diagnosis
S37.002A	Unspecified injury of left kidney, initial encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S37.009A	Unspecified injury of unspecified kidney, initial encounter	ICD-10-CM	Diagnosis
S37.011A	Minor contusion of right kidney, initial encounter	ICD-10-CM	Diagnosis
S37.012A	Minor contusion of left kidney, initial encounter	ICD-10-CM	Diagnosis
S37.019A	Minor contusion of unspecified kidney, initial encounter	ICD-10-CM	Diagnosis
S37.021A	Major contusion of right kidney, initial encounter	ICD-10-CM	Diagnosis
S37.022A	Major contusion of left kidney, initial encounter	ICD-10-CM	Diagnosis
S37.029A	Major contusion of unspecified kidney, initial encounter	ICD-10-CM	Diagnosis
S37.031A	Laceration of right kidney, unspecified degree, initial encounter	ICD-10-CM	Diagnosis
S37.032A	Laceration of left kidney, unspecified degree, initial encounter	ICD-10-CM	Diagnosis
S37.039A	Laceration of unspecified kidney, unspecified degree, initial encounter	ICD-10-CM	Diagnosis
S37.041A	Minor laceration of right kidney, initial encounter	ICD-10-CM	Diagnosis
S37.042A	Minor laceration of left kidney, initial encounter	ICD-10-CM	Diagnosis
S37.049A	Minor laceration of unspecified kidney, initial encounter	ICD-10-CM	Diagnosis
S37.051A	Moderate laceration of right kidney, initial encounter	ICD-10-CM	Diagnosis
S37.052A	Moderate laceration of left kidney, initial encounter	ICD-10-CM	Diagnosis
S37.059A	Moderate laceration of unspecified kidney, initial encounter	ICD-10-CM	Diagnosis
S37.061A	Major laceration of right kidney, initial encounter	ICD-10-CM	Diagnosis
S37.062A	Major laceration of left kidney, initial encounter	ICD-10-CM	Diagnosis
S37.069A	Major laceration of unspecified kidney, initial encounter	ICD-10-CM	Diagnosis
S37.091A	Other injury of right kidney, initial encounter	ICD-10-CM	Diagnosis
S37.092A	Other injury of left kidney, initial encounter	ICD-10-CM	Diagnosis
S37.099A	Other injury of unspecified kidney, initial encounter	ICD-10-CM	Diagnosis
S37.10XA	Unspecified injury of ureter, initial encounter	ICD-10-CM	Diagnosis
S37.12XA	Contusion of ureter, initial encounter	ICD-10-CM	Diagnosis
S37.13XA	Laceration of ureter, initial encounter	ICD-10-CM	Diagnosis
S37.19XA	Other injury of ureter, initial encounter	ICD-10-CM	Diagnosis
S37.20XA	Unspecified injury of bladder, initial encounter	ICD-10-CM	Diagnosis
S37.22XA	Contusion of bladder, initial encounter	ICD-10-CM	Diagnosis
S37.23XA	Laceration of bladder, initial encounter	ICD-10-CM	Diagnosis
S37.29XA	Other injury of bladder, initial encounter	ICD-10-CM	Diagnosis
S37.30XA	Unspecified injury of urethra, initial encounter	ICD-10-CM	Diagnosis
S37.32XA	Contusion of urethra, initial encounter	ICD-10-CM	Diagnosis
S37.33XA	Laceration of urethra, initial encounter	ICD-10-CM	Diagnosis
S37.39XA	Other injury of urethra, initial encounter	ICD-10-CM	Diagnosis
S37.401A	Unspecified injury of ovary, unilateral, initial encounter	ICD-10-CM	Diagnosis
S37.402A	Unspecified injury of ovary, bilateral, initial encounter	ICD-10-CM	Diagnosis
S37.409A	Unspecified injury of ovary, unspecified, initial encounter	ICD-10-CM	Diagnosis
S37.421A	Contusion of ovary, unilateral, initial encounter	ICD-10-CM	Diagnosis
S37.422A	Contusion of ovary, bilateral, initial encounter	ICD-10-CM	Diagnosis
S37.429A	Contusion of ovary, unspecified, initial encounter	ICD-10-CM	Diagnosis
S37.431A	Laceration of ovary, unilateral, initial encounter	ICD-10-CM	Diagnosis
S37.432A	Laceration of ovary, bilateral, initial encounter	ICD-10-CM	Diagnosis
S37.439A	Laceration of ovary, unspecified, initial encounter	ICD-10-CM	Diagnosis
S37.491A	Other injury of ovary, unilateral, initial encounter	ICD-10-CM	Diagnosis
S37.492A	Other injury of ovary, bilateral, initial encounter	ICD-10-CM	Diagnosis
S37.499A	Other injury of ovary, unspecified, initial encounter	ICD-10-CM	Diagnosis
S37.501A	Unspecified injury of fallopian tube, unilateral, initial encounter	ICD-10-CM	Diagnosis
S37.502A	Unspecified injury of fallopian tube, bilateral, initial encounter	ICD-10-CM	Diagnosis
S37.509A	Unspecified injury of fallopian tube, unspecified, initial encounter	ICD-10-CM	Diagnosis
S37.511A	Primary blast injury of fallopian tube, unilateral, initial encounter	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S37.512A	Primary blast injury of fallopian tube, bilateral, initial encounter	ICD-10-CM	Diagnosis
S37.519A	Primary blast injury of fallopian tube, unspecified, initial encounter	ICD-10-CM	Diagnosis
S37.521A	Contusion of fallopian tube, unilateral, initial encounter	ICD-10-CM	Diagnosis
S37.522A	Contusion of fallopian tube, bilateral, initial encounter	ICD-10-CM	Diagnosis
S37.529A	Contusion of fallopian tube, unspecified, initial encounter	ICD-10-CM	Diagnosis
S37.531A	Laceration of fallopian tube, unilateral, initial encounter	ICD-10-CM	Diagnosis
S37.532A	Laceration of fallopian tube, bilateral, initial encounter	ICD-10-CM	Diagnosis
S37.539A	Laceration of fallopian tube, unspecified, initial encounter	ICD-10-CM	Diagnosis
S37.591A	Other injury of fallopian tube, unilateral, initial encounter	ICD-10-CM	Diagnosis
S37.592A	Other injury of fallopian tube, bilateral, initial encounter	ICD-10-CM	Diagnosis
S37.599A	Other injury of fallopian tube, unspecified, initial encounter	ICD-10-CM	Diagnosis
S37.60XA	Unspecified injury of uterus, initial encounter	ICD-10-CM	Diagnosis
S37.62XA	Contusion of uterus, initial encounter	ICD-10-CM	Diagnosis
S37.63XA	Laceration of uterus, initial encounter	ICD-10-CM	Diagnosis
S37.69XA	Other injury of uterus, initial encounter	ICD-10-CM	Diagnosis
S37.822A	Contusion of prostate, initial encounter	ICD-10-CM	Diagnosis
S37.823A	Laceration of prostate, initial encounter	ICD-10-CM	Diagnosis
S37.828A	Other injury of prostate, initial encounter	ICD-10-CM	Diagnosis
S37.829A	Unspecified injury of prostate, initial encounter	ICD-10-CM	Diagnosis
S37.892A	Contusion of other urinary and pelvic organ, initial encounter	ICD-10-CM	Diagnosis
S37.893A	Laceration of other urinary and pelvic organ, initial encounter	ICD-10-CM	Diagnosis
S37.898A	Other injury of other urinary and pelvic organ, initial encounter	ICD-10-CM	Diagnosis
S37.899A	Unspecified injury of other urinary and pelvic organ, initial encounter	ICD-10-CM	Diagnosis
S37.90XA	Unspecified injury of unspecified urinary and pelvic organ, initial encounter	ICD-10-CM	Diagnosis
S37.92XA	Contusion of unspecified urinary and pelvic organ, initial encounter	ICD-10-CM	Diagnosis
S37.93XA	Laceration of unspecified urinary and pelvic organ, initial encounter	ICD-10-CM	Diagnosis
S37.99XA	Other injury of unspecified urinary and pelvic organ, initial encounter	ICD-10-CM	Diagnosis
S38.001A	Crushing injury of unspecified external genital organs, male, initial encounter	ICD-10-CM	Diagnosis
S38.002A	Crushing injury of unspecified external genital organs, female, initial encounter	ICD-10-CM	Diagnosis
S38.01XA	Crushing injury of penis, initial encounter	ICD-10-CM	Diagnosis
S38.02XA	Crushing injury of scrotum and testis, initial encounter	ICD-10-CM	Diagnosis
S38.03XA	Crushing injury of vulva, initial encounter	ICD-10-CM	Diagnosis
S38.1XXA	Crushing injury of abdomen, lower back, and pelvis, initial encounter	ICD-10-CM	Diagnosis
S42.001A	Fracture of unspecified part of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.001B	Fracture of unspecified part of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.002A	Fracture of unspecified part of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.002B	Fracture of unspecified part of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.009A	Fracture of unspecified part of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.009B	Fracture of unspecified part of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.011A	Anterior displaced fracture of sternal end of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.011B	Anterior displaced fracture of sternal end of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.012A	Anterior displaced fracture of sternal end of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.012B	Anterior displaced fracture of sternal end of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.013A	Anterior displaced fracture of sternal end of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S42.013B	Anterior displaced fracture of sternal end of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.014A	Posterior displaced fracture of sternal end of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.014B	Posterior displaced fracture of sternal end of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.015A	Posterior displaced fracture of sternal end of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.015B	Posterior displaced fracture of sternal end of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.016A	Posterior displaced fracture of sternal end of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.016B	Posterior displaced fracture of sternal end of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.017A	Nondisplaced fracture of sternal end of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.017B	Nondisplaced fracture of sternal end of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.018A	Nondisplaced fracture of sternal end of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.018B	Nondisplaced fracture of sternal end of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.019A	Nondisplaced fracture of sternal end of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.019B	Nondisplaced fracture of sternal end of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.021A	Displaced fracture of shaft of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.021B	Displaced fracture of shaft of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.022A	Displaced fracture of shaft of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.022B	Displaced fracture of shaft of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.023A	Displaced fracture of shaft of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.023B	Displaced fracture of shaft of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.024A	Nondisplaced fracture of shaft of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.024B	Nondisplaced fracture of shaft of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.025A	Nondisplaced fracture of shaft of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.025B	Nondisplaced fracture of shaft of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.026A	Nondisplaced fracture of shaft of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.026B	Nondisplaced fracture of shaft of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.031A	Displaced fracture of lateral end of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.031B	Displaced fracture of lateral end of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.032A	Displaced fracture of lateral end of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.032B	Displaced fracture of lateral end of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.033A	Displaced fracture of lateral end of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.033B	Displaced fracture of lateral end of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.034A	Nondisplaced fracture of lateral end of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S42.034B	Nondisplaced fracture of lateral end of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.035A	Nondisplaced fracture of lateral end of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.035B	Nondisplaced fracture of lateral end of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.036A	Nondisplaced fracture of lateral end of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.036B	Nondisplaced fracture of lateral end of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.101A	Fracture of unspecified part of scapula, right shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.101B	Fracture of unspecified part of scapula, right shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.102A	Fracture of unspecified part of scapula, left shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.102B	Fracture of unspecified part of scapula, left shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.109A	Fracture of unspecified part of scapula, unspecified shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.109B	Fracture of unspecified part of scapula, unspecified shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.111A	Displaced fracture of body of scapula, right shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.111B	Displaced fracture of body of scapula, right shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.112A	Displaced fracture of body of scapula, left shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.112B	Displaced fracture of body of scapula, left shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.113A	Displaced fracture of body of scapula, unspecified shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.113B	Displaced fracture of body of scapula, unspecified shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.114A	Nondisplaced fracture of body of scapula, right shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.114B	Nondisplaced fracture of body of scapula, right shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.115A	Nondisplaced fracture of body of scapula, left shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.115B	Nondisplaced fracture of body of scapula, left shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.116A	Nondisplaced fracture of body of scapula, unspecified shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.116B	Nondisplaced fracture of body of scapula, unspecified shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.121A	Displaced fracture of acromial process, right shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.121B	Displaced fracture of acromial process, right shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.122A	Displaced fracture of acromial process, left shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S42.122B	Displaced fracture of acromial process, left shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.123A	Displaced fracture of acromial process, unspecified shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.123B	Displaced fracture of acromial process, unspecified shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.124A	Nondisplaced fracture of acromial process, right shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.124B	Nondisplaced fracture of acromial process, right shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.125A	Nondisplaced fracture of acromial process, left shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.125B	Nondisplaced fracture of acromial process, left shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.126A	Nondisplaced fracture of acromial process, unspecified shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.126B	Nondisplaced fracture of acromial process, unspecified shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.131A	Displaced fracture of coracoid process, right shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.131B	Displaced fracture of coracoid process, right shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.132A	Displaced fracture of coracoid process, left shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.132B	Displaced fracture of coracoid process, left shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.133A	Displaced fracture of coracoid process, unspecified shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.133B	Displaced fracture of coracoid process, unspecified shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.134A	Nondisplaced fracture of coracoid process, right shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.134B	Nondisplaced fracture of coracoid process, right shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.135A	Nondisplaced fracture of coracoid process, left shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.135B	Nondisplaced fracture of coracoid process, left shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.136A	Nondisplaced fracture of coracoid process, unspecified shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.136B	Nondisplaced fracture of coracoid process, unspecified shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.141A	Displaced fracture of glenoid cavity of scapula, right shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.141B	Displaced fracture of glenoid cavity of scapula, right shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.142A	Displaced fracture of glenoid cavity of scapula, left shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.142B	Displaced fracture of glenoid cavity of scapula, left shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S42.143A	Displaced fracture of glenoid cavity of scapula, unspecified shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.143B	Displaced fracture of glenoid cavity of scapula, unspecified shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.144A	Nondisplaced fracture of glenoid cavity of scapula, right shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.144B	Nondisplaced fracture of glenoid cavity of scapula, right shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.145A	Nondisplaced fracture of glenoid cavity of scapula, left shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.145B	Nondisplaced fracture of glenoid cavity of scapula, left shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.146A	Nondisplaced fracture of glenoid cavity of scapula, unspecified shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.146B	Nondisplaced fracture of glenoid cavity of scapula, unspecified shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.151A	Displaced fracture of neck of scapula, right shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.151B	Displaced fracture of neck of scapula, right shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.152A	Displaced fracture of neck of scapula, left shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.152B	Displaced fracture of neck of scapula, left shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.153A	Displaced fracture of neck of scapula, unspecified shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.153B	Displaced fracture of neck of scapula, unspecified shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.154A	Nondisplaced fracture of neck of scapula, right shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.154B	Nondisplaced fracture of neck of scapula, right shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.155A	Nondisplaced fracture of neck of scapula, left shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.155B	Nondisplaced fracture of neck of scapula, left shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.156A	Nondisplaced fracture of neck of scapula, unspecified shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.156B	Nondisplaced fracture of neck of scapula, unspecified shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.191A	Fracture of other part of scapula, right shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.191B	Fracture of other part of scapula, right shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.192A	Fracture of other part of scapula, left shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.192B	Fracture of other part of scapula, left shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.199A	Fracture of other part of scapula, unspecified shoulder, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.199B	Fracture of other part of scapula, unspecified shoulder, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.201A	Unspecified fracture of upper end of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.201B	Unspecified fracture of upper end of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S42.202A	Unspecified fracture of upper end of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.202B	Unspecified fracture of upper end of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.209A	Unspecified fracture of upper end of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.209B	Unspecified fracture of upper end of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.211A	Unspecified displaced fracture of surgical neck of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.211B	Unspecified displaced fracture of surgical neck of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.212A	Unspecified displaced fracture of surgical neck of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.212B	Unspecified displaced fracture of surgical neck of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.213A	Unspecified displaced fracture of surgical neck of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.213B	Unspecified displaced fracture of surgical neck of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.214A	Unspecified nondisplaced fracture of surgical neck of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.214B	Unspecified nondisplaced fracture of surgical neck of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.215A	Unspecified nondisplaced fracture of surgical neck of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.215B	Unspecified nondisplaced fracture of surgical neck of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.216A	Unspecified nondisplaced fracture of surgical neck of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.216B	Unspecified nondisplaced fracture of surgical neck of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.221A	2-part displaced fracture of surgical neck of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.221B	2-part displaced fracture of surgical neck of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.222A	2-part displaced fracture of surgical neck of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.222B	2-part displaced fracture of surgical neck of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.223A	2-part displaced fracture of surgical neck of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.223B	2-part displaced fracture of surgical neck of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.224A	2-part nondisplaced fracture of surgical neck of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.224B	2-part nondisplaced fracture of surgical neck of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.225A	2-part nondisplaced fracture of surgical neck of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.225B	2-part nondisplaced fracture of surgical neck of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S42.226A	2-part nondisplaced fracture of surgical neck of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.226B	2-part nondisplaced fracture of surgical neck of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.231A	3-part fracture of surgical neck of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.231B	3-part fracture of surgical neck of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.232A	3-part fracture of surgical neck of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.232B	3-part fracture of surgical neck of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.239A	3-part fracture of surgical neck of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.239B	3-part fracture of surgical neck of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.241A	4-part fracture of surgical neck of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.241B	4-part fracture of surgical neck of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.242A	4-part fracture of surgical neck of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.242B	4-part fracture of surgical neck of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.249A	4-part fracture of surgical neck of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.249B	4-part fracture of surgical neck of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.251A	Displaced fracture of greater tuberosity of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.251B	Displaced fracture of greater tuberosity of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.252A	Displaced fracture of greater tuberosity of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.252B	Displaced fracture of greater tuberosity of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.253A	Displaced fracture of greater tuberosity of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.253B	Displaced fracture of greater tuberosity of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.254A	Nondisplaced fracture of greater tuberosity of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.254B	Nondisplaced fracture of greater tuberosity of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.255A	Nondisplaced fracture of greater tuberosity of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.255B	Nondisplaced fracture of greater tuberosity of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.256A	Nondisplaced fracture of greater tuberosity of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.256B	Nondisplaced fracture of greater tuberosity of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.261A	Displaced fracture of lesser tuberosity of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.261B	Displaced fracture of lesser tuberosity of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.262A	Displaced fracture of lesser tuberosity of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S42.262B	Displaced fracture of lesser tuberosity of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.263A	Displaced fracture of lesser tuberosity of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.263B	Displaced fracture of lesser tuberosity of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.264A	Nondisplaced fracture of lesser tuberosity of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.264B	Nondisplaced fracture of lesser tuberosity of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.265A	Nondisplaced fracture of lesser tuberosity of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.265B	Nondisplaced fracture of lesser tuberosity of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.266A	Nondisplaced fracture of lesser tuberosity of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.266B	Nondisplaced fracture of lesser tuberosity of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.271A	Torus fracture of upper end of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.272A	Torus fracture of upper end of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.279A	Torus fracture of upper end of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.291A	Other displaced fracture of upper end of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.291B	Other displaced fracture of upper end of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.292A	Other displaced fracture of upper end of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.292B	Other displaced fracture of upper end of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.293A	Other displaced fracture of upper end of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.293B	Other displaced fracture of upper end of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.294A	Other nondisplaced fracture of upper end of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.294B	Other nondisplaced fracture of upper end of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.295A	Other nondisplaced fracture of upper end of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.295B	Other nondisplaced fracture of upper end of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.296A	Other nondisplaced fracture of upper end of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.296B	Other nondisplaced fracture of upper end of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.301A	Unspecified fracture of shaft of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.301B	Unspecified fracture of shaft of humerus, right arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.302A	Unspecified fracture of shaft of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S42.302B	Unspecified fracture of shaft of humerus, left arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.309A	Unspecified fracture of shaft of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.309B	Unspecified fracture of shaft of humerus, unspecified arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.311A	Greenstick fracture of shaft of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.312A	Greenstick fracture of shaft of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.319A	Greenstick fracture of shaft of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.321A	Displaced transverse fracture of shaft of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.321B	Displaced transverse fracture of shaft of humerus, right arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.322A	Displaced transverse fracture of shaft of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.322B	Displaced transverse fracture of shaft of humerus, left arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.323A	Displaced transverse fracture of shaft of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.323B	Displaced transverse fracture of shaft of humerus, unspecified arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.324A	Nondisplaced transverse fracture of shaft of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.324B	Nondisplaced transverse fracture of shaft of humerus, right arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.325A	Nondisplaced transverse fracture of shaft of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.325B	Nondisplaced transverse fracture of shaft of humerus, left arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.326A	Nondisplaced transverse fracture of shaft of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.326B	Nondisplaced transverse fracture of shaft of humerus, unspecified arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.331A	Displaced oblique fracture of shaft of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.331B	Displaced oblique fracture of shaft of humerus, right arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.332A	Displaced oblique fracture of shaft of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.332B	Displaced oblique fracture of shaft of humerus, left arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.333A	Displaced oblique fracture of shaft of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.333B	Displaced oblique fracture of shaft of humerus, unspecified arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.334A	Nondisplaced oblique fracture of shaft of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.334B	Nondisplaced oblique fracture of shaft of humerus, right arm, initial encounter for open fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S42.335A	Nondisplaced oblique fracture of shaft of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.335B	Nondisplaced oblique fracture of shaft of humerus, left arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.336A	Nondisplaced oblique fracture of shaft of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.336B	Nondisplaced oblique fracture of shaft of humerus, unspecified arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.341A	Displaced spiral fracture of shaft of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.341B	Displaced spiral fracture of shaft of humerus, right arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.342A	Displaced spiral fracture of shaft of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.342B	Displaced spiral fracture of shaft of humerus, left arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.343A	Displaced spiral fracture of shaft of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.343B	Displaced spiral fracture of shaft of humerus, unspecified arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.344A	Nondisplaced spiral fracture of shaft of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.344B	Nondisplaced spiral fracture of shaft of humerus, right arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.345A	Nondisplaced spiral fracture of shaft of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.345B	Nondisplaced spiral fracture of shaft of humerus, left arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.346A	Nondisplaced spiral fracture of shaft of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.346B	Nondisplaced spiral fracture of shaft of humerus, unspecified arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.351A	Displaced comminuted fracture of shaft of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.351B	Displaced comminuted fracture of shaft of humerus, right arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.352A	Displaced comminuted fracture of shaft of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.352B	Displaced comminuted fracture of shaft of humerus, left arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.353A	Displaced comminuted fracture of shaft of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.353B	Displaced comminuted fracture of shaft of humerus, unspecified arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.354A	Nondisplaced comminuted fracture of shaft of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.354B	Nondisplaced comminuted fracture of shaft of humerus, right arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.355A	Nondisplaced comminuted fracture of shaft of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S42.355B	Nondisplaced comminuted fracture of shaft of humerus, left arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.356A	Nondisplaced comminuted fracture of shaft of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.356B	Nondisplaced comminuted fracture of shaft of humerus, unspecified arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.361A	Displaced segmental fracture of shaft of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.361B	Displaced segmental fracture of shaft of humerus, right arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.362A	Displaced segmental fracture of shaft of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.362B	Displaced segmental fracture of shaft of humerus, left arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.363A	Displaced segmental fracture of shaft of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.363B	Displaced segmental fracture of shaft of humerus, unspecified arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.364A	Nondisplaced segmental fracture of shaft of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.364B	Nondisplaced segmental fracture of shaft of humerus, right arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.365A	Nondisplaced segmental fracture of shaft of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.365B	Nondisplaced segmental fracture of shaft of humerus, left arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.366A	Nondisplaced segmental fracture of shaft of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.366B	Nondisplaced segmental fracture of shaft of humerus, unspecified arm, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.391A	Other fracture of shaft of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.391B	Other fracture of shaft of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.392A	Other fracture of shaft of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.392B	Other fracture of shaft of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.399A	Other fracture of shaft of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.399B	Other fracture of shaft of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.401A	Unspecified fracture of lower end of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.401B	Unspecified fracture of lower end of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.402A	Unspecified fracture of lower end of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.402B	Unspecified fracture of lower end of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.409A	Unspecified fracture of lower end of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.409B	Unspecified fracture of lower end of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.411A	Displaced simple supracondylar fracture without intercondylar fracture of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.411B	Displaced simple supracondylar fracture without intercondylar fracture of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.412A	Displaced simple supracondylar fracture without intercondylar fracture of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S42.412B	Displaced simple supracondylar fracture without intercondylar fracture of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.413A	Displaced simple supracondylar fracture without intercondylar fracture of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.413B	Displaced simple supracondylar fracture without intercondylar fracture of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.414A	Nondisplaced simple supracondylar fracture without intercondylar fracture of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.414B	Nondisplaced simple supracondylar fracture without intercondylar fracture of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.415A	Nondisplaced simple supracondylar fracture without intercondylar fracture of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.415B	Nondisplaced simple supracondylar fracture without intercondylar fracture of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.416A	Nondisplaced simple supracondylar fracture without intercondylar fracture of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.416B	Nondisplaced simple supracondylar fracture without intercondylar fracture of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.421A	Displaced comminuted supracondylar fracture without intercondylar fracture of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.421B	Displaced comminuted supracondylar fracture without intercondylar fracture of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.422A	Displaced comminuted supracondylar fracture without intercondylar fracture of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.422B	Displaced comminuted supracondylar fracture without intercondylar fracture of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.423A	Displaced comminuted supracondylar fracture without intercondylar fracture of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.423B	Displaced comminuted supracondylar fracture without intercondylar fracture of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.424A	Nondisplaced comminuted supracondylar fracture without intercondylar fracture of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.424B	Nondisplaced comminuted supracondylar fracture without intercondylar fracture of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.425A	Nondisplaced comminuted supracondylar fracture without intercondylar fracture of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.425B	Nondisplaced comminuted supracondylar fracture without intercondylar fracture of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.426A	Nondisplaced comminuted supracondylar fracture without intercondylar fracture of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.426B	Nondisplaced comminuted supracondylar fracture without intercondylar fracture of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.431A	Displaced fracture (avulsion) of lateral epicondyle of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.431B	Displaced fracture (avulsion) of lateral epicondyle of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.432A	Displaced fracture (avulsion) of lateral epicondyle of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.432B	Displaced fracture (avulsion) of lateral epicondyle of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S42.433A	Displaced fracture (avulsion) of lateral epicondyle of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.433B	Displaced fracture (avulsion) of lateral epicondyle of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.434A	Nondisplaced fracture (avulsion) of lateral epicondyle of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.434B	Nondisplaced fracture (avulsion) of lateral epicondyle of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.435A	Nondisplaced fracture (avulsion) of lateral epicondyle of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.435B	Nondisplaced fracture (avulsion) of lateral epicondyle of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.436A	Nondisplaced fracture (avulsion) of lateral epicondyle of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.436B	Nondisplaced fracture (avulsion) of lateral epicondyle of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.441A	Displaced fracture (avulsion) of medial epicondyle of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.441B	Displaced fracture (avulsion) of medial epicondyle of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.442A	Displaced fracture (avulsion) of medial epicondyle of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.442B	Displaced fracture (avulsion) of medial epicondyle of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.443A	Displaced fracture (avulsion) of medial epicondyle of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.443B	Displaced fracture (avulsion) of medial epicondyle of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.444A	Nondisplaced fracture (avulsion) of medial epicondyle of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.444B	Nondisplaced fracture (avulsion) of medial epicondyle of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.445A	Nondisplaced fracture (avulsion) of medial epicondyle of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.445B	Nondisplaced fracture (avulsion) of medial epicondyle of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.446A	Nondisplaced fracture (avulsion) of medial epicondyle of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.446B	Nondisplaced fracture (avulsion) of medial epicondyle of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.447A	Incarcerated fracture (avulsion) of medial epicondyle of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.447B	Incarcerated fracture (avulsion) of medial epicondyle of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.448A	Incarcerated fracture (avulsion) of medial epicondyle of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.448B	Incarcerated fracture (avulsion) of medial epicondyle of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.449A	Incarcerated fracture (avulsion) of medial epicondyle of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S42.449B	Incarcerated fracture (avulsion) of medial epicondyle of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.451A	Displaced fracture of lateral condyle of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.451B	Displaced fracture of lateral condyle of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.452A	Displaced fracture of lateral condyle of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.452B	Displaced fracture of lateral condyle of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.453A	Displaced fracture of lateral condyle of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.453B	Displaced fracture of lateral condyle of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.454A	Nondisplaced fracture of lateral condyle of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.454B	Nondisplaced fracture of lateral condyle of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.455A	Nondisplaced fracture of lateral condyle of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.455B	Nondisplaced fracture of lateral condyle of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.456A	Nondisplaced fracture of lateral condyle of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.456B	Nondisplaced fracture of lateral condyle of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.461A	Displaced fracture of medial condyle of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.461B	Displaced fracture of medial condyle of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.462A	Displaced fracture of medial condyle of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.462B	Displaced fracture of medial condyle of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.463A	Displaced fracture of medial condyle of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.463B	Displaced fracture of medial condyle of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.464A	Nondisplaced fracture of medial condyle of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.464B	Nondisplaced fracture of medial condyle of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.465A	Nondisplaced fracture of medial condyle of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.465B	Nondisplaced fracture of medial condyle of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.466A	Nondisplaced fracture of medial condyle of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.466B	Nondisplaced fracture of medial condyle of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S42.471A	Displaced transcondylar fracture of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.471B	Displaced transcondylar fracture of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.472A	Displaced transcondylar fracture of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.472B	Displaced transcondylar fracture of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.473A	Displaced transcondylar fracture of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.473B	Displaced transcondylar fracture of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.474A	Nondisplaced transcondylar fracture of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.474B	Nondisplaced transcondylar fracture of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.475A	Nondisplaced transcondylar fracture of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.475B	Nondisplaced transcondylar fracture of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.476A	Nondisplaced transcondylar fracture of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.476B	Nondisplaced transcondylar fracture of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.481A	Torus fracture of lower end of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.482A	Torus fracture of lower end of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.489A	Torus fracture of lower end of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.491A	Other displaced fracture of lower end of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.491B	Other displaced fracture of lower end of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.492A	Other displaced fracture of lower end of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.492B	Other displaced fracture of lower end of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.493A	Other displaced fracture of lower end of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.493B	Other displaced fracture of lower end of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.494A	Other nondisplaced fracture of lower end of right humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.494B	Other nondisplaced fracture of lower end of right humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.495A	Other nondisplaced fracture of lower end of left humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.495B	Other nondisplaced fracture of lower end of left humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.496A	Other nondisplaced fracture of lower end of unspecified humerus, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.496B	Other nondisplaced fracture of lower end of unspecified humerus, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.90XA	Fracture of unspecified shoulder girdle, part unspecified, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S42.90XB	Fracture of unspecified shoulder girdle, part unspecified, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.91XA	Fracture of right shoulder girdle, part unspecified, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.91XB	Fracture of right shoulder girdle, part unspecified, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.92XA	Fracture of left shoulder girdle, part unspecified, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.92XB	Fracture of left shoulder girdle, part unspecified, initial encounter for open fracture	ICD-10-CM	Diagnosis
S47.1XXA	Crushing injury of right shoulder and upper arm, initial encounter	ICD-10-CM	Diagnosis
S47.2XXA	Crushing injury of left shoulder and upper arm, initial encounter	ICD-10-CM	Diagnosis
S47.9XXA	Crushing injury of shoulder and upper arm, unspecified arm, initial encounter	ICD-10-CM	Diagnosis
S49.001A	Unspecified physeal fracture of upper end of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.002A	Unspecified physeal fracture of upper end of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.009A	Unspecified physeal fracture of upper end of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.011A	Salter-Harris Type I physeal fracture of upper end of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.012A	Salter-Harris Type I physeal fracture of upper end of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.019A	Salter-Harris Type I physeal fracture of upper end of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.021A	Salter-Harris Type II physeal fracture of upper end of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.022A	Salter-Harris Type II physeal fracture of upper end of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.029A	Salter-Harris Type II physeal fracture of upper end of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.031A	Salter-Harris Type III physeal fracture of upper end of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.032A	Salter-Harris Type III physeal fracture of upper end of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.039A	Salter-Harris Type III physeal fracture of upper end of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.041A	Salter-Harris Type IV physeal fracture of upper end of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.042A	Salter-Harris Type IV physeal fracture of upper end of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.049A	Salter-Harris Type IV physeal fracture of upper end of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.091A	Other physeal fracture of upper end of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.092A	Other physeal fracture of upper end of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.099A	Other physeal fracture of upper end of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.101A	Unspecified physeal fracture of lower end of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.102A	Unspecified physeal fracture of lower end of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S49.109A	Unspecified physeal fracture of lower end of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.111A	Salter-Harris Type I physeal fracture of lower end of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.112A	Salter-Harris Type I physeal fracture of lower end of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.119A	Salter-Harris Type I physeal fracture of lower end of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.121A	Salter-Harris Type II physeal fracture of lower end of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.122A	Salter-Harris Type II physeal fracture of lower end of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.129A	Salter-Harris Type II physeal fracture of lower end of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.131A	Salter-Harris Type III physeal fracture of lower end of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.132A	Salter-Harris Type III physeal fracture of lower end of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.139A	Salter-Harris Type III physeal fracture of lower end of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.141A	Salter-Harris Type IV physeal fracture of lower end of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.142A	Salter-Harris Type IV physeal fracture of lower end of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.149A	Salter-Harris Type IV physeal fracture of lower end of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.191A	Other physeal fracture of lower end of humerus, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.192A	Other physeal fracture of lower end of humerus, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S49.199A	Other physeal fracture of lower end of humerus, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.001A	Unspecified fracture of upper end of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.001B	Unspecified fracture of upper end of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.001C	Unspecified fracture of upper end of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.002A	Unspecified fracture of upper end of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.002B	Unspecified fracture of upper end of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.002C	Unspecified fracture of upper end of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.009A	Unspecified fracture of upper end of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.009B	Unspecified fracture of upper end of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.009C	Unspecified fracture of upper end of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.011A	Torus fracture of upper end of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.012A	Torus fracture of upper end of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S52.019A	Torus fracture of upper end of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.021A	Displaced fracture of olecranon process without intraarticular extension of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.021B	Displaced fracture of olecranon process without intraarticular extension of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.021C	Displaced fracture of olecranon process without intraarticular extension of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.022A	Displaced fracture of olecranon process without intraarticular extension of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.022B	Displaced fracture of olecranon process without intraarticular extension of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.022C	Displaced fracture of olecranon process without intraarticular extension of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.023A	Displaced fracture of olecranon process without intraarticular extension of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.023B	Displaced fracture of olecranon process without intraarticular extension of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.023C	Displaced fracture of olecranon process without intraarticular extension of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.024A	Nondisplaced fracture of olecranon process without intraarticular extension of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.024B	Nondisplaced fracture of olecranon process without intraarticular extension of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.024C	Nondisplaced fracture of olecranon process without intraarticular extension of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.025A	Nondisplaced fracture of olecranon process without intraarticular extension of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.025B	Nondisplaced fracture of olecranon process without intraarticular extension of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.025C	Nondisplaced fracture of olecranon process without intraarticular extension of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.026A	Nondisplaced fracture of olecranon process without intraarticular extension of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.026B	Nondisplaced fracture of olecranon process without intraarticular extension of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.026C	Nondisplaced fracture of olecranon process without intraarticular extension of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.031A	Displaced fracture of olecranon process with intraarticular extension of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.031B	Displaced fracture of olecranon process with intraarticular extension of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.031C	Displaced fracture of olecranon process with intraarticular extension of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.032A	Displaced fracture of olecranon process with intraarticular extension of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.032B	Displaced fracture of olecranon process with intraarticular extension of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.032C	Displaced fracture of olecranon process with intraarticular extension of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S52.033A	Displaced fracture of olecranon process with intraarticular extension of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.033B	Displaced fracture of olecranon process with intraarticular extension of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.033C	Displaced fracture of olecranon process with intraarticular extension of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.034A	Nondisplaced fracture of olecranon process with intraarticular extension of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.034B	Nondisplaced fracture of olecranon process with intraarticular extension of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.034C	Nondisplaced fracture of olecranon process with intraarticular extension of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.035A	Nondisplaced fracture of olecranon process with intraarticular extension of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.035B	Nondisplaced fracture of olecranon process with intraarticular extension of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.035C	Nondisplaced fracture of olecranon process with intraarticular extension of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.036A	Nondisplaced fracture of olecranon process with intraarticular extension of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.036B	Nondisplaced fracture of olecranon process with intraarticular extension of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.036C	Nondisplaced fracture of olecranon process with intraarticular extension of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.041A	Displaced fracture of coronoid process of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.041B	Displaced fracture of coronoid process of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.041C	Displaced fracture of coronoid process of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.042A	Displaced fracture of coronoid process of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.042B	Displaced fracture of coronoid process of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.042C	Displaced fracture of coronoid process of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.043A	Displaced fracture of coronoid process of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.043B	Displaced fracture of coronoid process of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.043C	Displaced fracture of coronoid process of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.044A	Nondisplaced fracture of coronoid process of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.044B	Nondisplaced fracture of coronoid process of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.044C	Nondisplaced fracture of coronoid process of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.045A	Nondisplaced fracture of coronoid process of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S52.045B	Nondisplaced fracture of coronoid process of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.045C	Nondisplaced fracture of coronoid process of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.046A	Nondisplaced fracture of coronoid process of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.046B	Nondisplaced fracture of coronoid process of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.046C	Nondisplaced fracture of coronoid process of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.091A	Other fracture of upper end of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.091B	Other fracture of upper end of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.091C	Other fracture of upper end of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.092A	Other fracture of upper end of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.092B	Other fracture of upper end of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.092C	Other fracture of upper end of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.099A	Other fracture of upper end of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.099B	Other fracture of upper end of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.099C	Other fracture of upper end of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.101A	Unspecified fracture of upper end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.101B	Unspecified fracture of upper end of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.101C	Unspecified fracture of upper end of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.102A	Unspecified fracture of upper end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.102B	Unspecified fracture of upper end of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.102C	Unspecified fracture of upper end of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.109A	Unspecified fracture of upper end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.109B	Unspecified fracture of upper end of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.109C	Unspecified fracture of upper end of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.111A	Torus fracture of upper end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.112A	Torus fracture of upper end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.119A	Torus fracture of upper end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.121A	Displaced fracture of head of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.121B	Displaced fracture of head of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.121C	Displaced fracture of head of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.122A	Displaced fracture of head of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.122B	Displaced fracture of head of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S52.122C	Displaced fracture of head of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.123A	Displaced fracture of head of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.123B	Displaced fracture of head of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.123C	Displaced fracture of head of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.124A	Nondisplaced fracture of head of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.124B	Nondisplaced fracture of head of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.124C	Nondisplaced fracture of head of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.125A	Nondisplaced fracture of head of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.125B	Nondisplaced fracture of head of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.125C	Nondisplaced fracture of head of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.126A	Nondisplaced fracture of head of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.126B	Nondisplaced fracture of head of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.126C	Nondisplaced fracture of head of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.131A	Displaced fracture of neck of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.131B	Displaced fracture of neck of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.131C	Displaced fracture of neck of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.132A	Displaced fracture of neck of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.132B	Displaced fracture of neck of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.132C	Displaced fracture of neck of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.133A	Displaced fracture of neck of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.133B	Displaced fracture of neck of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.133C	Displaced fracture of neck of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.134A	Nondisplaced fracture of neck of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.134B	Nondisplaced fracture of neck of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.134C	Nondisplaced fracture of neck of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.135A	Nondisplaced fracture of neck of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.135B	Nondisplaced fracture of neck of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.135C	Nondisplaced fracture of neck of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.136A	Nondisplaced fracture of neck of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.136B	Nondisplaced fracture of neck of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S52.136C	Nondisplaced fracture of neck of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.181A	Other fracture of upper end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.181B	Other fracture of upper end of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.181C	Other fracture of upper end of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.182A	Other fracture of upper end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.182B	Other fracture of upper end of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.182C	Other fracture of upper end of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.189A	Other fracture of upper end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.189B	Other fracture of upper end of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.189C	Other fracture of upper end of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.201A	Unspecified fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.201B	Unspecified fracture of shaft of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.201C	Unspecified fracture of shaft of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.202A	Unspecified fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.202B	Unspecified fracture of shaft of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.202C	Unspecified fracture of shaft of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.209A	Unspecified fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.209B	Unspecified fracture of shaft of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.209C	Unspecified fracture of shaft of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.211A	Greenstick fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.212A	Greenstick fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.219A	Greenstick fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.221A	Displaced transverse fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.221B	Displaced transverse fracture of shaft of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.221C	Displaced transverse fracture of shaft of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.222A	Displaced transverse fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.222B	Displaced transverse fracture of shaft of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.222C	Displaced transverse fracture of shaft of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.223A	Displaced transverse fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.223B	Displaced transverse fracture of shaft of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.223C	Displaced transverse fracture of shaft of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S52.224A	Nondisplaced transverse fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.224B	Nondisplaced transverse fracture of shaft of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.224C	Nondisplaced transverse fracture of shaft of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.225A	Nondisplaced transverse fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.225B	Nondisplaced transverse fracture of shaft of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.225C	Nondisplaced transverse fracture of shaft of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.226A	Nondisplaced transverse fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.226B	Nondisplaced transverse fracture of shaft of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.226C	Nondisplaced transverse fracture of shaft of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.231A	Displaced oblique fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.231B	Displaced oblique fracture of shaft of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.231C	Displaced oblique fracture of shaft of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.232A	Displaced oblique fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.232B	Displaced oblique fracture of shaft of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.232C	Displaced oblique fracture of shaft of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.233A	Displaced oblique fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.233B	Displaced oblique fracture of shaft of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.233C	Displaced oblique fracture of shaft of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.234A	Nondisplaced oblique fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.234B	Nondisplaced oblique fracture of shaft of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.234C	Nondisplaced oblique fracture of shaft of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.235A	Nondisplaced oblique fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.235B	Nondisplaced oblique fracture of shaft of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.235C	Nondisplaced oblique fracture of shaft of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.236A	Nondisplaced oblique fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.236B	Nondisplaced oblique fracture of shaft of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S52.236C	Nondisplaced oblique fracture of shaft of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.241A	Displaced spiral fracture of shaft of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.241B	Displaced spiral fracture of shaft of ulna, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.241C	Displaced spiral fracture of shaft of ulna, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.242A	Displaced spiral fracture of shaft of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.242B	Displaced spiral fracture of shaft of ulna, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.242C	Displaced spiral fracture of shaft of ulna, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.243A	Displaced spiral fracture of shaft of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.243B	Displaced spiral fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.243C	Displaced spiral fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.244A	Nondisplaced spiral fracture of shaft of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.244B	Nondisplaced spiral fracture of shaft of ulna, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.244C	Nondisplaced spiral fracture of shaft of ulna, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.245A	Nondisplaced spiral fracture of shaft of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.245B	Nondisplaced spiral fracture of shaft of ulna, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.245C	Nondisplaced spiral fracture of shaft of ulna, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.246A	Nondisplaced spiral fracture of shaft of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.246B	Nondisplaced spiral fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.246C	Nondisplaced spiral fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.251A	Displaced comminuted fracture of shaft of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.251B	Displaced comminuted fracture of shaft of ulna, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.251C	Displaced comminuted fracture of shaft of ulna, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.252A	Displaced comminuted fracture of shaft of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.252B	Displaced comminuted fracture of shaft of ulna, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.252C	Displaced comminuted fracture of shaft of ulna, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S52.253A	Displaced comminuted fracture of shaft of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.253B	Displaced comminuted fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.253C	Displaced comminuted fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.254A	Nondisplaced comminuted fracture of shaft of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.254B	Nondisplaced comminuted fracture of shaft of ulna, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.254C	Nondisplaced comminuted fracture of shaft of ulna, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.255A	Nondisplaced comminuted fracture of shaft of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.255B	Nondisplaced comminuted fracture of shaft of ulna, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.255C	Nondisplaced comminuted fracture of shaft of ulna, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.256A	Nondisplaced comminuted fracture of shaft of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.256B	Nondisplaced comminuted fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.256C	Nondisplaced comminuted fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.261A	Displaced segmental fracture of shaft of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.261B	Displaced segmental fracture of shaft of ulna, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.261C	Displaced segmental fracture of shaft of ulna, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.262A	Displaced segmental fracture of shaft of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.262B	Displaced segmental fracture of shaft of ulna, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.262C	Displaced segmental fracture of shaft of ulna, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.263A	Displaced segmental fracture of shaft of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.263B	Displaced segmental fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.263C	Displaced segmental fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.264A	Nondisplaced segmental fracture of shaft of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.264B	Nondisplaced segmental fracture of shaft of ulna, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.264C	Nondisplaced segmental fracture of shaft of ulna, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.265A	Nondisplaced segmental fracture of shaft of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S52.265B	Nondisplaced segmental fracture of shaft of ulna, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.265C	Nondisplaced segmental fracture of shaft of ulna, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.266A	Nondisplaced segmental fracture of shaft of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.266B	Nondisplaced segmental fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.266C	Nondisplaced segmental fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.271A	Monteggia's fracture of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.271B	Monteggia's fracture of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.271C	Monteggia's fracture of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.272A	Monteggia's fracture of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.272B	Monteggia's fracture of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.272C	Monteggia's fracture of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.279A	Monteggia's fracture of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.279B	Monteggia's fracture of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.279C	Monteggia's fracture of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.281A	Bent bone of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.281B	Bent bone of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.281C	Bent bone of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.282A	Bent bone of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.282B	Bent bone of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.282C	Bent bone of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.283A	Bent bone of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.283B	Bent bone of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.283C	Bent bone of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.291A	Other fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.291B	Other fracture of shaft of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.291C	Other fracture of shaft of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.292A	Other fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.292B	Other fracture of shaft of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.292C	Other fracture of shaft of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.299A	Other fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.299B	Other fracture of shaft of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.299C	Other fracture of shaft of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.301A	Unspecified fracture of shaft of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.301B	Unspecified fracture of shaft of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.301C	Unspecified fracture of shaft of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.302A	Unspecified fracture of shaft of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S52.302B	Unspecified fracture of shaft of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.302C	Unspecified fracture of shaft of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.309A	Unspecified fracture of shaft of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.309B	Unspecified fracture of shaft of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.309C	Unspecified fracture of shaft of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.311A	Greenstick fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.312A	Greenstick fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.319A	Greenstick fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.321A	Displaced transverse fracture of shaft of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.321B	Displaced transverse fracture of shaft of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.321C	Displaced transverse fracture of shaft of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.322A	Displaced transverse fracture of shaft of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.322B	Displaced transverse fracture of shaft of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.322C	Displaced transverse fracture of shaft of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.323A	Displaced transverse fracture of shaft of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.323B	Displaced transverse fracture of shaft of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.323C	Displaced transverse fracture of shaft of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.324A	Nondisplaced transverse fracture of shaft of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.324B	Nondisplaced transverse fracture of shaft of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.324C	Nondisplaced transverse fracture of shaft of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.325A	Nondisplaced transverse fracture of shaft of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.325B	Nondisplaced transverse fracture of shaft of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.325C	Nondisplaced transverse fracture of shaft of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.326A	Nondisplaced transverse fracture of shaft of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.326B	Nondisplaced transverse fracture of shaft of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.326C	Nondisplaced transverse fracture of shaft of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.331A	Displaced oblique fracture of shaft of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S52.331B	Displaced oblique fracture of shaft of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.331C	Displaced oblique fracture of shaft of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.332A	Displaced oblique fracture of shaft of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.332B	Displaced oblique fracture of shaft of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.332C	Displaced oblique fracture of shaft of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.333A	Displaced oblique fracture of shaft of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.333B	Displaced oblique fracture of shaft of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.333C	Displaced oblique fracture of shaft of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.334A	Nondisplaced oblique fracture of shaft of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.334B	Nondisplaced oblique fracture of shaft of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.334C	Nondisplaced oblique fracture of shaft of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.335A	Nondisplaced oblique fracture of shaft of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.335B	Nondisplaced oblique fracture of shaft of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.335C	Nondisplaced oblique fracture of shaft of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.336A	Nondisplaced oblique fracture of shaft of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.336B	Nondisplaced oblique fracture of shaft of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.336C	Nondisplaced oblique fracture of shaft of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.341A	Displaced spiral fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.341B	Displaced spiral fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.341C	Displaced spiral fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.342A	Displaced spiral fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.342B	Displaced spiral fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.342C	Displaced spiral fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.343A	Displaced spiral fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.343B	Displaced spiral fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S52.343C	Displaced spiral fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.344A	Nondisplaced spiral fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.344B	Nondisplaced spiral fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.344C	Nondisplaced spiral fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.345A	Nondisplaced spiral fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.345B	Nondisplaced spiral fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.345C	Nondisplaced spiral fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.346A	Nondisplaced spiral fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.346B	Nondisplaced spiral fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.346C	Nondisplaced spiral fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.351A	Displaced comminuted fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.351B	Displaced comminuted fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.351C	Displaced comminuted fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.352A	Displaced comminuted fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.352B	Displaced comminuted fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.352C	Displaced comminuted fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.353A	Displaced comminuted fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.353B	Displaced comminuted fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.353C	Displaced comminuted fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.354A	Nondisplaced comminuted fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.354B	Nondisplaced comminuted fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.354C	Nondisplaced comminuted fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.355A	Nondisplaced comminuted fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.355B	Nondisplaced comminuted fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.355C	Nondisplaced comminuted fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S52.356A	Nondisplaced comminuted fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.356B	Nondisplaced comminuted fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.356C	Nondisplaced comminuted fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.361A	Displaced segmental fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.361B	Displaced segmental fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.361C	Displaced segmental fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.362A	Displaced segmental fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.362B	Displaced segmental fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.362C	Displaced segmental fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.363A	Displaced segmental fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.363B	Displaced segmental fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.363C	Displaced segmental fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.364A	Nondisplaced segmental fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.364B	Nondisplaced segmental fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.364C	Nondisplaced segmental fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.365A	Nondisplaced segmental fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.365B	Nondisplaced segmental fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.365C	Nondisplaced segmental fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.366A	Nondisplaced segmental fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.366B	Nondisplaced segmental fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.366C	Nondisplaced segmental fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.371A	Galeazzi's fracture of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.371B	Galeazzi's fracture of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.371C	Galeazzi's fracture of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.372A	Galeazzi's fracture of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.372B	Galeazzi's fracture of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.372C	Galeazzi's fracture of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S52.379A	Galeazzi's fracture of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.379B	Galeazzi's fracture of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.379C	Galeazzi's fracture of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.381A	Bent bone of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.381B	Bent bone of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.381C	Bent bone of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.382A	Bent bone of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.382B	Bent bone of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.382C	Bent bone of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.389A	Bent bone of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.389B	Bent bone of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.389C	Bent bone of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.391A	Other fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.391B	Other fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.391C	Other fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.392A	Other fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.392B	Other fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.392C	Other fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.399A	Other fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.399B	Other fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.399C	Other fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.501A	Unspecified fracture of the lower end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.501B	Unspecified fracture of the lower end of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.501C	Unspecified fracture of the lower end of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.502A	Unspecified fracture of the lower end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.502B	Unspecified fracture of the lower end of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.502C	Unspecified fracture of the lower end of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.509A	Unspecified fracture of the lower end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.509B	Unspecified fracture of the lower end of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.509C	Unspecified fracture of the lower end of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.511A	Displaced fracture of right radial styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.511B	Displaced fracture of right radial styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.511C	Displaced fracture of right radial styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S52.512A	Displaced fracture of left radial styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.512B	Displaced fracture of left radial styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.512C	Displaced fracture of left radial styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.513A	Displaced fracture of unspecified radial styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.513B	Displaced fracture of unspecified radial styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.513C	Displaced fracture of unspecified radial styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.514A	Nondisplaced fracture of right radial styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.514B	Nondisplaced fracture of right radial styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.514C	Nondisplaced fracture of right radial styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.515A	Nondisplaced fracture of left radial styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.515B	Nondisplaced fracture of left radial styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.515C	Nondisplaced fracture of left radial styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.516A	Nondisplaced fracture of unspecified radial styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.516B	Nondisplaced fracture of unspecified radial styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.516C	Nondisplaced fracture of unspecified radial styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.521A	Torus fracture of lower end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.522A	Torus fracture of lower end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.529A	Torus fracture of lower end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.531A	Colles' fracture of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.531B	Colles' fracture of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.531C	Colles' fracture of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.532A	Colles' fracture of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.532B	Colles' fracture of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.532C	Colles' fracture of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.539A	Colles' fracture of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.539B	Colles' fracture of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.539C	Colles' fracture of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.541A	Smith's fracture of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.541B	Smith's fracture of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.541C	Smith's fracture of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.542A	Smith's fracture of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.542B	Smith's fracture of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.542C	Smith's fracture of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.549A	Smith's fracture of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.549B	Smith's fracture of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S52.549C	Smith's fracture of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.551A	Other extraarticular fracture of lower end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.551B	Other extraarticular fracture of lower end of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.551C	Other extraarticular fracture of lower end of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.552A	Other extraarticular fracture of lower end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.552B	Other extraarticular fracture of lower end of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.552C	Other extraarticular fracture of lower end of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.559A	Other extraarticular fracture of lower end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.559B	Other extraarticular fracture of lower end of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.559C	Other extraarticular fracture of lower end of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.561A	Barton's fracture of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.561B	Barton's fracture of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.561C	Barton's fracture of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.562A	Barton's fracture of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.562B	Barton's fracture of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.562C	Barton's fracture of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.569A	Barton's fracture of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.569B	Barton's fracture of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.569C	Barton's fracture of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.571A	Other intraarticular fracture of lower end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.571B	Other intraarticular fracture of lower end of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.571C	Other intraarticular fracture of lower end of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.572A	Other intraarticular fracture of lower end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.572B	Other intraarticular fracture of lower end of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.572C	Other intraarticular fracture of lower end of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.579A	Other intraarticular fracture of lower end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.579B	Other intraarticular fracture of lower end of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.579C	Other intraarticular fracture of lower end of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.591A	Other fractures of lower end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S52.591B	Other fractures of lower end of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.591C	Other fractures of lower end of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.592A	Other fractures of lower end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.592B	Other fractures of lower end of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.592C	Other fractures of lower end of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.599A	Other fractures of lower end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.599B	Other fractures of lower end of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.599C	Other fractures of lower end of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.601A	Unspecified fracture of lower end of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.601B	Unspecified fracture of lower end of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.601C	Unspecified fracture of lower end of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.602A	Unspecified fracture of lower end of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.602B	Unspecified fracture of lower end of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.602C	Unspecified fracture of lower end of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.609A	Unspecified fracture of lower end of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.609B	Unspecified fracture of lower end of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.609C	Unspecified fracture of lower end of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.611A	Displaced fracture of right ulna styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.611B	Displaced fracture of right ulna styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.611C	Displaced fracture of right ulna styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.612A	Displaced fracture of left ulna styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.612B	Displaced fracture of left ulna styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.612C	Displaced fracture of left ulna styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.613A	Displaced fracture of unspecified ulna styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.613B	Displaced fracture of unspecified ulna styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.613C	Displaced fracture of unspecified ulna styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.614A	Nondisplaced fracture of right ulna styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.614B	Nondisplaced fracture of right ulna styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S52.614C	Nondisplaced fracture of right ulna styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.615A	Nondisplaced fracture of left ulna styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.615B	Nondisplaced fracture of left ulna styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.615C	Nondisplaced fracture of left ulna styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.616A	Nondisplaced fracture of unspecified ulna styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.616B	Nondisplaced fracture of unspecified ulna styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.616C	Nondisplaced fracture of unspecified ulna styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.621A	Torus fracture of lower end of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.622A	Torus fracture of lower end of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.629A	Torus fracture of lower end of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.691A	Other fracture of lower end of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.691B	Other fracture of lower end of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.691C	Other fracture of lower end of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.692A	Other fracture of lower end of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.692B	Other fracture of lower end of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.692C	Other fracture of lower end of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.699A	Other fracture of lower end of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.699B	Other fracture of lower end of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.699C	Other fracture of lower end of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.90XA	Unspecified fracture of unspecified forearm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.90XB	Unspecified fracture of unspecified forearm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.90XC	Unspecified fracture of unspecified forearm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.91XA	Unspecified fracture of right forearm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.91XB	Unspecified fracture of right forearm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.91XC	Unspecified fracture of right forearm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.92XA	Unspecified fracture of left forearm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.92XB	Unspecified fracture of left forearm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.92XC	Unspecified fracture of left forearm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S57.00XA	Crushing injury of unspecified elbow, initial encounter	ICD-10-CM	Diagnosis
S57.01XA	Crushing injury of right elbow, initial encounter	ICD-10-CM	Diagnosis
S57.02XA	Crushing injury of left elbow, initial encounter	ICD-10-CM	Diagnosis
S57.80XA	Crushing injury of unspecified forearm, initial encounter	ICD-10-CM	Diagnosis
S57.81XA	Crushing injury of right forearm, initial encounter	ICD-10-CM	Diagnosis
S57.82XA	Crushing injury of left forearm, initial encounter	ICD-10-CM	Diagnosis
S59.001A	Unspecified physeal fracture of lower end of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S59.002A	Unspecified physeal fracture of lower end of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.009A	Unspecified physeal fracture of lower end of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.011A	Salter-Harris Type I physeal fracture of lower end of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.012A	Salter-Harris Type I physeal fracture of lower end of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.019A	Salter-Harris Type I physeal fracture of lower end of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.021A	Salter-Harris Type II physeal fracture of lower end of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.022A	Salter-Harris Type II physeal fracture of lower end of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.029A	Salter-Harris Type II physeal fracture of lower end of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.031A	Salter-Harris Type III physeal fracture of lower end of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.032A	Salter-Harris Type III physeal fracture of lower end of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.039A	Salter-Harris Type III physeal fracture of lower end of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.041A	Salter-Harris Type IV physeal fracture of lower end of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.042A	Salter-Harris Type IV physeal fracture of lower end of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.049A	Salter-Harris Type IV physeal fracture of lower end of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.091A	Other physeal fracture of lower end of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.092A	Other physeal fracture of lower end of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.099A	Other physeal fracture of lower end of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.101A	Unspecified physeal fracture of upper end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.102A	Unspecified physeal fracture of upper end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.109A	Unspecified physeal fracture of upper end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.111A	Salter-Harris Type I physeal fracture of upper end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.112A	Salter-Harris Type I physeal fracture of upper end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.119A	Salter-Harris Type I physeal fracture of upper end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.121A	Salter-Harris Type II physeal fracture of upper end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.122A	Salter-Harris Type II physeal fracture of upper end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S59.129A	Salter-Harris Type II physeal fracture of upper end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.131A	Salter-Harris Type III physeal fracture of upper end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.132A	Salter-Harris Type III physeal fracture of upper end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.139A	Salter-Harris Type III physeal fracture of upper end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.141A	Salter-Harris Type IV physeal fracture of upper end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.142A	Salter-Harris Type IV physeal fracture of upper end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.149A	Salter-Harris Type IV physeal fracture of upper end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.191A	Other physeal fracture of upper end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.192A	Other physeal fracture of upper end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.199A	Other physeal fracture of upper end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.201A	Unspecified physeal fracture of lower end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.202A	Unspecified physeal fracture of lower end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.209A	Unspecified physeal fracture of lower end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.211A	Salter-Harris Type I physeal fracture of lower end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.212A	Salter-Harris Type I physeal fracture of lower end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.219A	Salter-Harris Type I physeal fracture of lower end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.221A	Salter-Harris Type II physeal fracture of lower end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.222A	Salter-Harris Type II physeal fracture of lower end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.229A	Salter-Harris Type II physeal fracture of lower end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.231A	Salter-Harris Type III physeal fracture of lower end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.232A	Salter-Harris Type III physeal fracture of lower end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.239A	Salter-Harris Type III physeal fracture of lower end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.241A	Salter-Harris Type IV physeal fracture of lower end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.242A	Salter-Harris Type IV physeal fracture of lower end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.249A	Salter-Harris Type IV physeal fracture of lower end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S59.291A	Other physeal fracture of lower end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.292A	Other physeal fracture of lower end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.299A	Other physeal fracture of lower end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S62.90XA	Unspecified fracture of unspecified wrist and hand, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S62.90XB	Unspecified fracture of unspecified wrist and hand, initial encounter for open fracture	ICD-10-CM	Diagnosis
S67.00XA	Crushing injury of unspecified thumb, initial encounter	ICD-10-CM	Diagnosis
S67.01XA	Crushing injury of right thumb, initial encounter	ICD-10-CM	Diagnosis
S67.02XA	Crushing injury of left thumb, initial encounter	ICD-10-CM	Diagnosis
S67.10XA	Crushing injury of unspecified finger(s), initial encounter	ICD-10-CM	Diagnosis
S67.190A	Crushing injury of right index finger, initial encounter	ICD-10-CM	Diagnosis
S67.191A	Crushing injury of left index finger, initial encounter	ICD-10-CM	Diagnosis
S67.192A	Crushing injury of right middle finger, initial encounter	ICD-10-CM	Diagnosis
S67.193A	Crushing injury of left middle finger, initial encounter	ICD-10-CM	Diagnosis
S67.194A	Crushing injury of right ring finger, initial encounter	ICD-10-CM	Diagnosis
S67.195A	Crushing injury of left ring finger, initial encounter	ICD-10-CM	Diagnosis
S67.196A	Crushing injury of right little finger, initial encounter	ICD-10-CM	Diagnosis
S67.197A	Crushing injury of left little finger, initial encounter	ICD-10-CM	Diagnosis
S67.198A	Crushing injury of other finger, initial encounter	ICD-10-CM	Diagnosis
S67.20XA	Crushing injury of unspecified hand, initial encounter	ICD-10-CM	Diagnosis
S67.21XA	Crushing injury of right hand, initial encounter	ICD-10-CM	Diagnosis
S67.22XA	Crushing injury of left hand, initial encounter	ICD-10-CM	Diagnosis
S67.30XA	Crushing injury of unspecified wrist, initial encounter	ICD-10-CM	Diagnosis
S67.31XA	Crushing injury of right wrist, initial encounter	ICD-10-CM	Diagnosis
S67.32XA	Crushing injury of left wrist, initial encounter	ICD-10-CM	Diagnosis
S67.40XA	Crushing injury of unspecified wrist and hand, initial encounter	ICD-10-CM	Diagnosis
S67.41XA	Crushing injury of right wrist and hand, initial encounter	ICD-10-CM	Diagnosis
S67.42XA	Crushing injury of left wrist and hand, initial encounter	ICD-10-CM	Diagnosis
S67.90XA	Crushing injury of unspecified part(s) of unspecified wrist, hand and fingers, initial encounter	ICD-10-CM	Diagnosis
S67.91XA	Crushing injury of unspecified part(s) of right wrist, hand and fingers, initial encounter	ICD-10-CM	Diagnosis
S67.92XA	Crushing injury of unspecified part(s) of left wrist, hand and fingers, initial encounter	ICD-10-CM	Diagnosis
S72.001A	Fracture of unspecified part of neck of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.001B	Fracture of unspecified part of neck of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.001C	Fracture of unspecified part of neck of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.002A	Fracture of unspecified part of neck of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.002B	Fracture of unspecified part of neck of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.002C	Fracture of unspecified part of neck of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.009A	Fracture of unspecified part of neck of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.009B	Fracture of unspecified part of neck of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S72.009C	Fracture of unspecified part of neck of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.011A	Unspecified intracapsular fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.011B	Unspecified intracapsular fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.011C	Unspecified intracapsular fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.012A	Unspecified intracapsular fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.012B	Unspecified intracapsular fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.012C	Unspecified intracapsular fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.019A	Unspecified intracapsular fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.019B	Unspecified intracapsular fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.019C	Unspecified intracapsular fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.021A	Displaced fracture of epiphysis (separation) (upper) of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.021B	Displaced fracture of epiphysis (separation) (upper) of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.021C	Displaced fracture of epiphysis (separation) (upper) of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.022A	Displaced fracture of epiphysis (separation) (upper) of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.022B	Displaced fracture of epiphysis (separation) (upper) of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.022C	Displaced fracture of epiphysis (separation) (upper) of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.023A	Displaced fracture of epiphysis (separation) (upper) of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.023B	Displaced fracture of epiphysis (separation) (upper) of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.023C	Displaced fracture of epiphysis (separation) (upper) of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.024A	Nondisplaced fracture of epiphysis (separation) (upper) of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.024B	Nondisplaced fracture of epiphysis (separation) (upper) of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.024C	Nondisplaced fracture of epiphysis (separation) (upper) of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.025A	Nondisplaced fracture of epiphysis (separation) (upper) of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.025B	Nondisplaced fracture of epiphysis (separation) (upper) of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.025C	Nondisplaced fracture of epiphysis (separation) (upper) of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.026A	Nondisplaced fracture of epiphysis (separation) (upper) of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S72.026B	Nondisplaced fracture of epiphysis (separation) (upper) of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.026C	Nondisplaced fracture of epiphysis (separation) (upper) of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.031A	Displaced midcervical fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.031B	Displaced midcervical fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.031C	Displaced midcervical fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.032A	Displaced midcervical fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.032B	Displaced midcervical fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.032C	Displaced midcervical fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.033A	Displaced midcervical fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.033B	Displaced midcervical fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.033C	Displaced midcervical fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.034A	Nondisplaced midcervical fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.034B	Nondisplaced midcervical fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.034C	Nondisplaced midcervical fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.035A	Nondisplaced midcervical fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.035B	Nondisplaced midcervical fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.035C	Nondisplaced midcervical fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.036A	Nondisplaced midcervical fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.036B	Nondisplaced midcervical fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.036C	Nondisplaced midcervical fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.041A	Displaced fracture of base of neck of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.041B	Displaced fracture of base of neck of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.041C	Displaced fracture of base of neck of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.042A	Displaced fracture of base of neck of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.042B	Displaced fracture of base of neck of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.042C	Displaced fracture of base of neck of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.043A	Displaced fracture of base of neck of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.043B	Displaced fracture of base of neck of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S72.043C	Displaced fracture of base of neck of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.044A	Nondisplaced fracture of base of neck of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.044B	Nondisplaced fracture of base of neck of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.044C	Nondisplaced fracture of base of neck of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.045A	Nondisplaced fracture of base of neck of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.045B	Nondisplaced fracture of base of neck of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.045C	Nondisplaced fracture of base of neck of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.046A	Nondisplaced fracture of base of neck of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.046B	Nondisplaced fracture of base of neck of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.046C	Nondisplaced fracture of base of neck of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.051A	Unspecified fracture of head of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.051B	Unspecified fracture of head of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.051C	Unspecified fracture of head of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.052A	Unspecified fracture of head of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.052B	Unspecified fracture of head of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.052C	Unspecified fracture of head of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.059A	Unspecified fracture of head of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.059B	Unspecified fracture of head of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.059C	Unspecified fracture of head of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.061A	Displaced articular fracture of head of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.061B	Displaced articular fracture of head of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.061C	Displaced articular fracture of head of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.062A	Displaced articular fracture of head of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.062B	Displaced articular fracture of head of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.062C	Displaced articular fracture of head of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.063A	Displaced articular fracture of head of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.063B	Displaced articular fracture of head of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.063C	Displaced articular fracture of head of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S72.064A	Nondisplaced articular fracture of head of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.064B	Nondisplaced articular fracture of head of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.064C	Nondisplaced articular fracture of head of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.065A	Nondisplaced articular fracture of head of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.065B	Nondisplaced articular fracture of head of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.065C	Nondisplaced articular fracture of head of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.066A	Nondisplaced articular fracture of head of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.066B	Nondisplaced articular fracture of head of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.066C	Nondisplaced articular fracture of head of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.091A	Other fracture of head and neck of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.091B	Other fracture of head and neck of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.091C	Other fracture of head and neck of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.092A	Other fracture of head and neck of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.092B	Other fracture of head and neck of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.092C	Other fracture of head and neck of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.099A	Other fracture of head and neck of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.099B	Other fracture of head and neck of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.099C	Other fracture of head and neck of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.101A	Unspecified trochanteric fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.101B	Unspecified trochanteric fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.101C	Unspecified trochanteric fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.102A	Unspecified trochanteric fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.102B	Unspecified trochanteric fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.102C	Unspecified trochanteric fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.109A	Unspecified trochanteric fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.109B	Unspecified trochanteric fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.109C	Unspecified trochanteric fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S72.111A	Displaced fracture of greater trochanter of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.111B	Displaced fracture of greater trochanter of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.111C	Displaced fracture of greater trochanter of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.112A	Displaced fracture of greater trochanter of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.112B	Displaced fracture of greater trochanter of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.112C	Displaced fracture of greater trochanter of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.113A	Displaced fracture of greater trochanter of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.113B	Displaced fracture of greater trochanter of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.113C	Displaced fracture of greater trochanter of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.114A	Nondisplaced fracture of greater trochanter of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.114B	Nondisplaced fracture of greater trochanter of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.114C	Nondisplaced fracture of greater trochanter of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.115A	Nondisplaced fracture of greater trochanter of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.115B	Nondisplaced fracture of greater trochanter of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.115C	Nondisplaced fracture of greater trochanter of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.116A	Nondisplaced fracture of greater trochanter of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.116B	Nondisplaced fracture of greater trochanter of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.116C	Nondisplaced fracture of greater trochanter of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.121A	Displaced fracture of lesser trochanter of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.121B	Displaced fracture of lesser trochanter of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.121C	Displaced fracture of lesser trochanter of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.122A	Displaced fracture of lesser trochanter of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.122B	Displaced fracture of lesser trochanter of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.122C	Displaced fracture of lesser trochanter of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.123A	Displaced fracture of lesser trochanter of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S72.123B	Displaced fracture of lesser trochanter of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.123C	Displaced fracture of lesser trochanter of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.124A	Nondisplaced fracture of lesser trochanter of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.124B	Nondisplaced fracture of lesser trochanter of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.124C	Nondisplaced fracture of lesser trochanter of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.125A	Nondisplaced fracture of lesser trochanter of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.125B	Nondisplaced fracture of lesser trochanter of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.125C	Nondisplaced fracture of lesser trochanter of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.126A	Nondisplaced fracture of lesser trochanter of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.126B	Nondisplaced fracture of lesser trochanter of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.126C	Nondisplaced fracture of lesser trochanter of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.131A	Displaced apophyseal fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.131B	Displaced apophyseal fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.131C	Displaced apophyseal fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.132A	Displaced apophyseal fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.132B	Displaced apophyseal fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.132C	Displaced apophyseal fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.133A	Displaced apophyseal fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.133B	Displaced apophyseal fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.133C	Displaced apophyseal fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.134A	Nondisplaced apophyseal fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.134B	Nondisplaced apophyseal fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.134C	Nondisplaced apophyseal fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.135A	Nondisplaced apophyseal fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.135B	Nondisplaced apophyseal fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.135C	Nondisplaced apophyseal fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.136A	Nondisplaced apophyseal fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S72.136B	Nondisplaced apophyseal fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.136C	Nondisplaced apophyseal fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.141A	Displaced intertrochanteric fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.141B	Displaced intertrochanteric fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.141C	Displaced intertrochanteric fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.142A	Displaced intertrochanteric fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.142B	Displaced intertrochanteric fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.142C	Displaced intertrochanteric fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.143A	Displaced intertrochanteric fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.143B	Displaced intertrochanteric fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.143C	Displaced intertrochanteric fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.144A	Nondisplaced intertrochanteric fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.144B	Nondisplaced intertrochanteric fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.144C	Nondisplaced intertrochanteric fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.145A	Nondisplaced intertrochanteric fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.145B	Nondisplaced intertrochanteric fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.145C	Nondisplaced intertrochanteric fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.146A	Nondisplaced intertrochanteric fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.146B	Nondisplaced intertrochanteric fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.146C	Nondisplaced intertrochanteric fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.21XA	Displaced subtrochanteric fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.21XB	Displaced subtrochanteric fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.21XC	Displaced subtrochanteric fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.22XA	Displaced subtrochanteric fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.22XB	Displaced subtrochanteric fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.22XC	Displaced subtrochanteric fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.23XA	Displaced subtrochanteric fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S72.23XB	Displaced subtrochanteric fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.23XC	Displaced subtrochanteric fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.24XA	Nondisplaced subtrochanteric fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.24XB	Nondisplaced subtrochanteric fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.24XC	Nondisplaced subtrochanteric fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.25XA	Nondisplaced subtrochanteric fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.25XB	Nondisplaced subtrochanteric fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.25XC	Nondisplaced subtrochanteric fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.26XA	Nondisplaced subtrochanteric fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.26XB	Nondisplaced subtrochanteric fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.26XC	Nondisplaced subtrochanteric fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.301A	Unspecified fracture of shaft of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.301B	Unspecified fracture of shaft of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.301C	Unspecified fracture of shaft of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.302A	Unspecified fracture of shaft of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.302B	Unspecified fracture of shaft of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.302C	Unspecified fracture of shaft of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.309A	Unspecified fracture of shaft of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.309B	Unspecified fracture of shaft of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.309C	Unspecified fracture of shaft of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.321A	Displaced transverse fracture of shaft of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.321B	Displaced transverse fracture of shaft of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.321C	Displaced transverse fracture of shaft of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.322A	Displaced transverse fracture of shaft of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.322B	Displaced transverse fracture of shaft of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.322C	Displaced transverse fracture of shaft of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.323A	Displaced transverse fracture of shaft of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S72.323B	Displaced transverse fracture of shaft of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.323C	Displaced transverse fracture of shaft of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.324A	Nondisplaced transverse fracture of shaft of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.324B	Nondisplaced transverse fracture of shaft of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.324C	Nondisplaced transverse fracture of shaft of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.325A	Nondisplaced transverse fracture of shaft of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.325B	Nondisplaced transverse fracture of shaft of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.325C	Nondisplaced transverse fracture of shaft of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.326A	Nondisplaced transverse fracture of shaft of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.326B	Nondisplaced transverse fracture of shaft of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.326C	Nondisplaced transverse fracture of shaft of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.331A	Displaced oblique fracture of shaft of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.331B	Displaced oblique fracture of shaft of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.331C	Displaced oblique fracture of shaft of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.332A	Displaced oblique fracture of shaft of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.332B	Displaced oblique fracture of shaft of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.332C	Displaced oblique fracture of shaft of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.333A	Displaced oblique fracture of shaft of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.333B	Displaced oblique fracture of shaft of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.333C	Displaced oblique fracture of shaft of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.334A	Nondisplaced oblique fracture of shaft of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.334B	Nondisplaced oblique fracture of shaft of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.334C	Nondisplaced oblique fracture of shaft of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.335A	Nondisplaced oblique fracture of shaft of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.335B	Nondisplaced oblique fracture of shaft of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.335C	Nondisplaced oblique fracture of shaft of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S72.336A	Nondisplaced oblique fracture of shaft of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.336B	Nondisplaced oblique fracture of shaft of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.336C	Nondisplaced oblique fracture of shaft of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.341A	Displaced spiral fracture of shaft of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.341B	Displaced spiral fracture of shaft of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.341C	Displaced spiral fracture of shaft of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.342A	Displaced spiral fracture of shaft of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.342B	Displaced spiral fracture of shaft of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.342C	Displaced spiral fracture of shaft of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.343A	Displaced spiral fracture of shaft of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.343B	Displaced spiral fracture of shaft of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.343C	Displaced spiral fracture of shaft of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.344A	Nondisplaced spiral fracture of shaft of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.344B	Nondisplaced spiral fracture of shaft of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.344C	Nondisplaced spiral fracture of shaft of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.345A	Nondisplaced spiral fracture of shaft of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.345B	Nondisplaced spiral fracture of shaft of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.345C	Nondisplaced spiral fracture of shaft of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.346A	Nondisplaced spiral fracture of shaft of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.346B	Nondisplaced spiral fracture of shaft of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.346C	Nondisplaced spiral fracture of shaft of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.351A	Displaced comminuted fracture of shaft of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.351B	Displaced comminuted fracture of shaft of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.351C	Displaced comminuted fracture of shaft of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.352A	Displaced comminuted fracture of shaft of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.352B	Displaced comminuted fracture of shaft of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S72.352C	Displaced comminuted fracture of shaft of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.353A	Displaced comminuted fracture of shaft of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.353B	Displaced comminuted fracture of shaft of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.353C	Displaced comminuted fracture of shaft of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.354A	Nondisplaced comminuted fracture of shaft of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.354B	Nondisplaced comminuted fracture of shaft of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.354C	Nondisplaced comminuted fracture of shaft of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.355A	Nondisplaced comminuted fracture of shaft of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.355B	Nondisplaced comminuted fracture of shaft of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.355C	Nondisplaced comminuted fracture of shaft of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.356A	Nondisplaced comminuted fracture of shaft of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.356B	Nondisplaced comminuted fracture of shaft of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.356C	Nondisplaced comminuted fracture of shaft of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.361A	Displaced segmental fracture of shaft of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.361B	Displaced segmental fracture of shaft of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.361C	Displaced segmental fracture of shaft of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.362A	Displaced segmental fracture of shaft of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.362B	Displaced segmental fracture of shaft of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.362C	Displaced segmental fracture of shaft of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.363A	Displaced segmental fracture of shaft of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.363B	Displaced segmental fracture of shaft of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.363C	Displaced segmental fracture of shaft of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.364A	Nondisplaced segmental fracture of shaft of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.364B	Nondisplaced segmental fracture of shaft of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.364C	Nondisplaced segmental fracture of shaft of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S72.365A	Nondisplaced segmental fracture of shaft of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.365B	Nondisplaced segmental fracture of shaft of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.365C	Nondisplaced segmental fracture of shaft of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.366A	Nondisplaced segmental fracture of shaft of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.366B	Nondisplaced segmental fracture of shaft of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.366C	Nondisplaced segmental fracture of shaft of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.391A	Other fracture of shaft of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.391B	Other fracture of shaft of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.391C	Other fracture of shaft of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.392A	Other fracture of shaft of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.392B	Other fracture of shaft of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.392C	Other fracture of shaft of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.399A	Other fracture of shaft of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.399B	Other fracture of shaft of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.399C	Other fracture of shaft of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.401A	Unspecified fracture of lower end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.401B	Unspecified fracture of lower end of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.401C	Unspecified fracture of lower end of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.402A	Unspecified fracture of lower end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.402B	Unspecified fracture of lower end of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.402C	Unspecified fracture of lower end of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.409A	Unspecified fracture of lower end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.409B	Unspecified fracture of lower end of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.409C	Unspecified fracture of lower end of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.411A	Displaced unspecified condyle fracture of lower end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.411B	Displaced unspecified condyle fracture of lower end of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.411C	Displaced unspecified condyle fracture of lower end of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.412A	Displaced unspecified condyle fracture of lower end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S72.412B	Displaced unspecified condyle fracture of lower end of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.412C	Displaced unspecified condyle fracture of lower end of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.413A	Displaced unspecified condyle fracture of lower end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.413B	Displaced unspecified condyle fracture of lower end of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.413C	Displaced unspecified condyle fracture of lower end of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.414A	Nondisplaced unspecified condyle fracture of lower end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.414B	Nondisplaced unspecified condyle fracture of lower end of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.414C	Nondisplaced unspecified condyle fracture of lower end of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.415A	Nondisplaced unspecified condyle fracture of lower end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.415B	Nondisplaced unspecified condyle fracture of lower end of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.415C	Nondisplaced unspecified condyle fracture of lower end of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.416A	Nondisplaced unspecified condyle fracture of lower end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.416B	Nondisplaced unspecified condyle fracture of lower end of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.416C	Nondisplaced unspecified condyle fracture of lower end of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.421A	Displaced fracture of lateral condyle of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.421B	Displaced fracture of lateral condyle of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.421C	Displaced fracture of lateral condyle of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.422A	Displaced fracture of lateral condyle of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.422B	Displaced fracture of lateral condyle of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.422C	Displaced fracture of lateral condyle of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.423A	Displaced fracture of lateral condyle of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.423B	Displaced fracture of lateral condyle of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.423C	Displaced fracture of lateral condyle of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.424A	Nondisplaced fracture of lateral condyle of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.424B	Nondisplaced fracture of lateral condyle of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S72.424C	Nondisplaced fracture of lateral condyle of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.425A	Nondisplaced fracture of lateral condyle of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.425B	Nondisplaced fracture of lateral condyle of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.425C	Nondisplaced fracture of lateral condyle of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.426A	Nondisplaced fracture of lateral condyle of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.426B	Nondisplaced fracture of lateral condyle of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.426C	Nondisplaced fracture of lateral condyle of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.431A	Displaced fracture of medial condyle of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.431B	Displaced fracture of medial condyle of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.431C	Displaced fracture of medial condyle of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.432A	Displaced fracture of medial condyle of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.432B	Displaced fracture of medial condyle of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.432C	Displaced fracture of medial condyle of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.433A	Displaced fracture of medial condyle of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.433B	Displaced fracture of medial condyle of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.433C	Displaced fracture of medial condyle of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.434A	Nondisplaced fracture of medial condyle of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.434B	Nondisplaced fracture of medial condyle of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.434C	Nondisplaced fracture of medial condyle of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.435A	Nondisplaced fracture of medial condyle of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.435B	Nondisplaced fracture of medial condyle of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.435C	Nondisplaced fracture of medial condyle of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.436A	Nondisplaced fracture of medial condyle of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.436B	Nondisplaced fracture of medial condyle of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.436C	Nondisplaced fracture of medial condyle of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S72.441A	Displaced fracture of lower epiphysis (separation) of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.441B	Displaced fracture of lower epiphysis (separation) of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.441C	Displaced fracture of lower epiphysis (separation) of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.442A	Displaced fracture of lower epiphysis (separation) of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.442B	Displaced fracture of lower epiphysis (separation) of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.442C	Displaced fracture of lower epiphysis (separation) of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.443A	Displaced fracture of lower epiphysis (separation) of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.443B	Displaced fracture of lower epiphysis (separation) of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.443C	Displaced fracture of lower epiphysis (separation) of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.444A	Nondisplaced fracture of lower epiphysis (separation) of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.444B	Nondisplaced fracture of lower epiphysis (separation) of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.444C	Nondisplaced fracture of lower epiphysis (separation) of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.445A	Nondisplaced fracture of lower epiphysis (separation) of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.445B	Nondisplaced fracture of lower epiphysis (separation) of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.445C	Nondisplaced fracture of lower epiphysis (separation) of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.446A	Nondisplaced fracture of lower epiphysis (separation) of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.446B	Nondisplaced fracture of lower epiphysis (separation) of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.446C	Nondisplaced fracture of lower epiphysis (separation) of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.451A	Displaced supracondylar fracture without intracondylar extension of lower end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.451B	Displaced supracondylar fracture without intracondylar extension of lower end of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.451C	Displaced supracondylar fracture without intracondylar extension of lower end of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.452A	Displaced supracondylar fracture without intracondylar extension of lower end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.452B	Displaced supracondylar fracture without intracondylar extension of lower end of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.452C	Displaced supracondylar fracture without intracondylar extension of lower end of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.453A	Displaced supracondylar fracture without intracondylar extension of lower end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S72.453B	Displaced supracondylar fracture without intracondylar extension of lower end of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.453C	Displaced supracondylar fracture without intracondylar extension of lower end of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.454A	Nondisplaced supracondylar fracture without intracondylar extension of lower end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.454B	Nondisplaced supracondylar fracture without intracondylar extension of lower end of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.454C	Nondisplaced supracondylar fracture without intracondylar extension of lower end of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.455A	Nondisplaced supracondylar fracture without intracondylar extension of lower end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.455B	Nondisplaced supracondylar fracture without intracondylar extension of lower end of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.455C	Nondisplaced supracondylar fracture without intracondylar extension of lower end of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.456A	Nondisplaced supracondylar fracture without intracondylar extension of lower end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.456B	Nondisplaced supracondylar fracture without intracondylar extension of lower end of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.456C	Nondisplaced supracondylar fracture without intracondylar extension of lower end of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.461A	Displaced supracondylar fracture with intracondylar extension of lower end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.461B	Displaced supracondylar fracture with intracondylar extension of lower end of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.461C	Displaced supracondylar fracture with intracondylar extension of lower end of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.462A	Displaced supracondylar fracture with intracondylar extension of lower end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.462B	Displaced supracondylar fracture with intracondylar extension of lower end of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.462C	Displaced supracondylar fracture with intracondylar extension of lower end of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.463A	Displaced supracondylar fracture with intracondylar extension of lower end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.463B	Displaced supracondylar fracture with intracondylar extension of lower end of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.463C	Displaced supracondylar fracture with intracondylar extension of lower end of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.464A	Nondisplaced supracondylar fracture with intracondylar extension of lower end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.464B	Nondisplaced supracondylar fracture with intracondylar extension of lower end of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.464C	Nondisplaced supracondylar fracture with intracondylar extension of lower end of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.465A	Nondisplaced supracondylar fracture with intracondylar extension of lower end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.465B	Nondisplaced supracondylar fracture with intracondylar extension of lower end of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S72.465C	Nondisplaced supracondylar fracture with intracondylar extension of lower end of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.466A	Nondisplaced supracondylar fracture with intracondylar extension of lower end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.466B	Nondisplaced supracondylar fracture with intracondylar extension of lower end of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.466C	Nondisplaced supracondylar fracture with intracondylar extension of lower end of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.471A	Torus fracture of lower end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.472A	Torus fracture of lower end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.479A	Torus fracture of lower end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.491A	Other fracture of lower end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.491B	Other fracture of lower end of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.491C	Other fracture of lower end of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.492A	Other fracture of lower end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.492B	Other fracture of lower end of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.492C	Other fracture of lower end of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.499A	Other fracture of lower end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.499B	Other fracture of lower end of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.499C	Other fracture of lower end of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.8X1A	Other fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.8X1B	Other fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.8X1C	Other fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.8X2A	Other fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.8X2B	Other fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.8X2C	Other fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.8X9A	Other fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.8X9B	Other fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.8X9C	Other fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.90XA	Unspecified fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.90XB	Unspecified fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.90XC	Unspecified fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.90XE	Unspecified fracture of unspecified femur, subsequent encounter for open fracture type I or II with routine healing	ICD-10-CM	Diagnosis
S72.91XA	Unspecified fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.91XB	Unspecified fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.91XC	Unspecified fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.91XE	Unspecified fracture of right femur, subsequent encounter for open fracture type I or II with routine healing	ICD-10-CM	Diagnosis
S72.92XA	Unspecified fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.92XB	Unspecified fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S72.92XC	Unspecified fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.92XE	Unspecified fracture of left femur, subsequent encounter for open fracture type I or II with routine healing	ICD-10-CM	Diagnosis
S77.00XA	Crushing injury of unspecified hip, initial encounter	ICD-10-CM	Diagnosis
S77.01XA	Crushing injury of right hip, initial encounter	ICD-10-CM	Diagnosis
S77.02XA	Crushing injury of left hip, initial encounter	ICD-10-CM	Diagnosis
S77.10XA	Crushing injury of unspecified thigh, initial encounter	ICD-10-CM	Diagnosis
S77.11XA	Crushing injury of right thigh, initial encounter	ICD-10-CM	Diagnosis
S77.12XA	Crushing injury of left thigh, initial encounter	ICD-10-CM	Diagnosis
S77.20XA	Crushing injury of unspecified hip with thigh, initial encounter	ICD-10-CM	Diagnosis
S77.21XA	Crushing injury of right hip with thigh, initial encounter	ICD-10-CM	Diagnosis
S77.22XA	Crushing injury of left hip with thigh, initial encounter	ICD-10-CM	Diagnosis
S79.001A	Unspecified physeal fracture of upper end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.002A	Unspecified physeal fracture of upper end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.009A	Unspecified physeal fracture of upper end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.011A	Salter-Harris Type I physeal fracture of upper end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.012A	Salter-Harris Type I physeal fracture of upper end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.019A	Salter-Harris Type I physeal fracture of upper end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.091A	Other physeal fracture of upper end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.092A	Other physeal fracture of upper end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.099A	Other physeal fracture of upper end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.101A	Unspecified physeal fracture of lower end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.102A	Unspecified physeal fracture of lower end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.109A	Unspecified physeal fracture of lower end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.111A	Salter-Harris Type I physeal fracture of lower end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.112A	Salter-Harris Type I physeal fracture of lower end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.119A	Salter-Harris Type I physeal fracture of lower end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.121A	Salter-Harris Type II physeal fracture of lower end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.122A	Salter-Harris Type II physeal fracture of lower end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.129A	Salter-Harris Type II physeal fracture of lower end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.131A	Salter-Harris Type III physeal fracture of lower end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S79.132A	Salter-Harris Type III physeal fracture of lower end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.139A	Salter-Harris Type III physeal fracture of lower end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.141A	Salter-Harris Type IV physeal fracture of lower end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.142A	Salter-Harris Type IV physeal fracture of lower end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.149A	Salter-Harris Type IV physeal fracture of lower end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.191A	Other physeal fracture of lower end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.192A	Other physeal fracture of lower end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.199A	Other physeal fracture of lower end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.001A	Unspecified fracture of right patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.001B	Unspecified fracture of right patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.001C	Unspecified fracture of right patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.002A	Unspecified fracture of left patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.002B	Unspecified fracture of left patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.002C	Unspecified fracture of left patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.009A	Unspecified fracture of unspecified patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.009B	Unspecified fracture of unspecified patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.009C	Unspecified fracture of unspecified patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.011A	Displaced osteochondral fracture of right patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.011B	Displaced osteochondral fracture of right patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.011C	Displaced osteochondral fracture of right patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.012A	Displaced osteochondral fracture of left patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.012B	Displaced osteochondral fracture of left patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.012C	Displaced osteochondral fracture of left patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.013A	Displaced osteochondral fracture of unspecified patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.013B	Displaced osteochondral fracture of unspecified patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.013C	Displaced osteochondral fracture of unspecified patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.014A	Nondisplaced osteochondral fracture of right patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.014B	Nondisplaced osteochondral fracture of right patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.014C	Nondisplaced osteochondral fracture of right patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S82.015A	Nondisplaced osteochondral fracture of left patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.015B	Nondisplaced osteochondral fracture of left patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.015C	Nondisplaced osteochondral fracture of left patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.016A	Nondisplaced osteochondral fracture of unspecified patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.016B	Nondisplaced osteochondral fracture of unspecified patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.016C	Nondisplaced osteochondral fracture of unspecified patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.021A	Displaced longitudinal fracture of right patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.021B	Displaced longitudinal fracture of right patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.021C	Displaced longitudinal fracture of right patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.022A	Displaced longitudinal fracture of left patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.022B	Displaced longitudinal fracture of left patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.022C	Displaced longitudinal fracture of left patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.023A	Displaced longitudinal fracture of unspecified patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.023B	Displaced longitudinal fracture of unspecified patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.023C	Displaced longitudinal fracture of unspecified patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.024A	Nondisplaced longitudinal fracture of right patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.024B	Nondisplaced longitudinal fracture of right patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.024C	Nondisplaced longitudinal fracture of right patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.025A	Nondisplaced longitudinal fracture of left patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.025B	Nondisplaced longitudinal fracture of left patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.025C	Nondisplaced longitudinal fracture of left patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.026A	Nondisplaced longitudinal fracture of unspecified patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.026B	Nondisplaced longitudinal fracture of unspecified patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.026C	Nondisplaced longitudinal fracture of unspecified patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.031A	Displaced transverse fracture of right patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.031B	Displaced transverse fracture of right patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.031C	Displaced transverse fracture of right patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S82.032A	Displaced transverse fracture of left patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.032B	Displaced transverse fracture of left patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.032C	Displaced transverse fracture of left patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.033A	Displaced transverse fracture of unspecified patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.033B	Displaced transverse fracture of unspecified patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.033C	Displaced transverse fracture of unspecified patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.034A	Nondisplaced transverse fracture of right patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.034B	Nondisplaced transverse fracture of right patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.034C	Nondisplaced transverse fracture of right patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.035A	Nondisplaced transverse fracture of left patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.035B	Nondisplaced transverse fracture of left patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.035C	Nondisplaced transverse fracture of left patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.036A	Nondisplaced transverse fracture of unspecified patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.036B	Nondisplaced transverse fracture of unspecified patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.036C	Nondisplaced transverse fracture of unspecified patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.041A	Displaced comminuted fracture of right patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.041B	Displaced comminuted fracture of right patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.041C	Displaced comminuted fracture of right patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.042A	Displaced comminuted fracture of left patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.042B	Displaced comminuted fracture of left patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.042C	Displaced comminuted fracture of left patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.043A	Displaced comminuted fracture of unspecified patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.043B	Displaced comminuted fracture of unspecified patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.043C	Displaced comminuted fracture of unspecified patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.044A	Nondisplaced comminuted fracture of right patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.044B	Nondisplaced comminuted fracture of right patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.044C	Nondisplaced comminuted fracture of right patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.045A	Nondisplaced comminuted fracture of left patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S82.045B	Nondisplaced comminuted fracture of left patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.045C	Nondisplaced comminuted fracture of left patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.046A	Nondisplaced comminuted fracture of unspecified patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.046B	Nondisplaced comminuted fracture of unspecified patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.046C	Nondisplaced comminuted fracture of unspecified patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.091A	Other fracture of right patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.091B	Other fracture of right patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.091C	Other fracture of right patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.092A	Other fracture of left patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.092B	Other fracture of left patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.092C	Other fracture of left patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.099A	Other fracture of unspecified patella, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.099B	Other fracture of unspecified patella, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.099C	Other fracture of unspecified patella, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.101A	Unspecified fracture of upper end of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.101B	Unspecified fracture of upper end of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.101C	Unspecified fracture of upper end of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.102A	Unspecified fracture of upper end of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.102B	Unspecified fracture of upper end of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.102C	Unspecified fracture of upper end of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.109A	Unspecified fracture of upper end of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.109B	Unspecified fracture of upper end of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.109C	Unspecified fracture of upper end of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.111A	Displaced fracture of right tibial spine, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.111B	Displaced fracture of right tibial spine, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.111C	Displaced fracture of right tibial spine, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.112A	Displaced fracture of left tibial spine, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.112B	Displaced fracture of left tibial spine, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.112C	Displaced fracture of left tibial spine, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.113A	Displaced fracture of unspecified tibial spine, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.113B	Displaced fracture of unspecified tibial spine, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.113C	Displaced fracture of unspecified tibial spine, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.114A	Nondisplaced fracture of right tibial spine, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S82.114B	Nondisplaced fracture of right tibial spine, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.114C	Nondisplaced fracture of right tibial spine, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.115A	Nondisplaced fracture of left tibial spine, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.115B	Nondisplaced fracture of left tibial spine, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.115C	Nondisplaced fracture of left tibial spine, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.116A	Nondisplaced fracture of unspecified tibial spine, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.116B	Nondisplaced fracture of unspecified tibial spine, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.116C	Nondisplaced fracture of unspecified tibial spine, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.121A	Displaced fracture of lateral condyle of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.121B	Displaced fracture of lateral condyle of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.121C	Displaced fracture of lateral condyle of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.122A	Displaced fracture of lateral condyle of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.122B	Displaced fracture of lateral condyle of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.122C	Displaced fracture of lateral condyle of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.123A	Displaced fracture of lateral condyle of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.123B	Displaced fracture of lateral condyle of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.123C	Displaced fracture of lateral condyle of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.124A	Nondisplaced fracture of lateral condyle of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.124B	Nondisplaced fracture of lateral condyle of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.124C	Nondisplaced fracture of lateral condyle of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.125A	Nondisplaced fracture of lateral condyle of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.125B	Nondisplaced fracture of lateral condyle of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.125C	Nondisplaced fracture of lateral condyle of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.126A	Nondisplaced fracture of lateral condyle of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.126B	Nondisplaced fracture of lateral condyle of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.126C	Nondisplaced fracture of lateral condyle of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.131A	Displaced fracture of medial condyle of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.131B	Displaced fracture of medial condyle of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S82.131C	Displaced fracture of medial condyle of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.132A	Displaced fracture of medial condyle of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.132B	Displaced fracture of medial condyle of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.132C	Displaced fracture of medial condyle of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.133A	Displaced fracture of medial condyle of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.133B	Displaced fracture of medial condyle of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.133C	Displaced fracture of medial condyle of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.134A	Nondisplaced fracture of medial condyle of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.134B	Nondisplaced fracture of medial condyle of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.134C	Nondisplaced fracture of medial condyle of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.135A	Nondisplaced fracture of medial condyle of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.135B	Nondisplaced fracture of medial condyle of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.135C	Nondisplaced fracture of medial condyle of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.136A	Nondisplaced fracture of medial condyle of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.136B	Nondisplaced fracture of medial condyle of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.136C	Nondisplaced fracture of medial condyle of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.141A	Displaced bicondylar fracture of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.141B	Displaced bicondylar fracture of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.141C	Displaced bicondylar fracture of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.142A	Displaced bicondylar fracture of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.142B	Displaced bicondylar fracture of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.142C	Displaced bicondylar fracture of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.143A	Displaced bicondylar fracture of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.143B	Displaced bicondylar fracture of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.143C	Displaced bicondylar fracture of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.144A	Nondisplaced bicondylar fracture of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.144B	Nondisplaced bicondylar fracture of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S82.144C	Nondisplaced bicondylar fracture of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.145A	Nondisplaced bicondylar fracture of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.145B	Nondisplaced bicondylar fracture of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.145C	Nondisplaced bicondylar fracture of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.146A	Nondisplaced bicondylar fracture of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.146B	Nondisplaced bicondylar fracture of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.146C	Nondisplaced bicondylar fracture of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.151A	Displaced fracture of right tibial tuberosity, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.151B	Displaced fracture of right tibial tuberosity, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.151C	Displaced fracture of right tibial tuberosity, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.152A	Displaced fracture of left tibial tuberosity, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.152B	Displaced fracture of left tibial tuberosity, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.152C	Displaced fracture of left tibial tuberosity, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.153A	Displaced fracture of unspecified tibial tuberosity, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.153B	Displaced fracture of unspecified tibial tuberosity, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.153C	Displaced fracture of unspecified tibial tuberosity, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.154A	Nondisplaced fracture of right tibial tuberosity, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.154B	Nondisplaced fracture of right tibial tuberosity, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.154C	Nondisplaced fracture of right tibial tuberosity, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.155A	Nondisplaced fracture of left tibial tuberosity, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.155B	Nondisplaced fracture of left tibial tuberosity, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.155C	Nondisplaced fracture of left tibial tuberosity, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.156A	Nondisplaced fracture of unspecified tibial tuberosity, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.156B	Nondisplaced fracture of unspecified tibial tuberosity, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.156C	Nondisplaced fracture of unspecified tibial tuberosity, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.161A	Torus fracture of upper end of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.162A	Torus fracture of upper end of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.169A	Torus fracture of upper end of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.191A	Other fracture of upper end of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.191B	Other fracture of upper end of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S82.191C	Other fracture of upper end of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.192A	Other fracture of upper end of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.192B	Other fracture of upper end of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.192C	Other fracture of upper end of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.199A	Other fracture of upper end of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.199B	Other fracture of upper end of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.199C	Other fracture of upper end of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.201A	Unspecified fracture of shaft of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.201B	Unspecified fracture of shaft of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.201C	Unspecified fracture of shaft of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.202A	Unspecified fracture of shaft of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.202B	Unspecified fracture of shaft of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.202C	Unspecified fracture of shaft of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.209A	Unspecified fracture of shaft of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.209B	Unspecified fracture of shaft of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.209C	Unspecified fracture of shaft of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.221A	Displaced transverse fracture of shaft of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.221B	Displaced transverse fracture of shaft of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.221C	Displaced transverse fracture of shaft of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.222A	Displaced transverse fracture of shaft of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.222B	Displaced transverse fracture of shaft of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.222C	Displaced transverse fracture of shaft of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.223A	Displaced transverse fracture of shaft of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.223B	Displaced transverse fracture of shaft of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.223C	Displaced transverse fracture of shaft of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.224A	Nondisplaced transverse fracture of shaft of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.224B	Nondisplaced transverse fracture of shaft of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.224C	Nondisplaced transverse fracture of shaft of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.225A	Nondisplaced transverse fracture of shaft of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S82.225B	Nondisplaced transverse fracture of shaft of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.225C	Nondisplaced transverse fracture of shaft of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.226A	Nondisplaced transverse fracture of shaft of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.226B	Nondisplaced transverse fracture of shaft of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.226C	Nondisplaced transverse fracture of shaft of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.231A	Displaced oblique fracture of shaft of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.231B	Displaced oblique fracture of shaft of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.231C	Displaced oblique fracture of shaft of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.232A	Displaced oblique fracture of shaft of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.232B	Displaced oblique fracture of shaft of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.232C	Displaced oblique fracture of shaft of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.233A	Displaced oblique fracture of shaft of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.233B	Displaced oblique fracture of shaft of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.233C	Displaced oblique fracture of shaft of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.234A	Nondisplaced oblique fracture of shaft of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.234B	Nondisplaced oblique fracture of shaft of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.234C	Nondisplaced oblique fracture of shaft of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.235A	Nondisplaced oblique fracture of shaft of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.235B	Nondisplaced oblique fracture of shaft of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.235C	Nondisplaced oblique fracture of shaft of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.236A	Nondisplaced oblique fracture of shaft of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.236B	Nondisplaced oblique fracture of shaft of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.236C	Nondisplaced oblique fracture of shaft of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.241A	Displaced spiral fracture of shaft of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.241B	Displaced spiral fracture of shaft of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.241C	Displaced spiral fracture of shaft of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.242A	Displaced spiral fracture of shaft of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S82.242B	Displaced spiral fracture of shaft of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.242C	Displaced spiral fracture of shaft of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.243A	Displaced spiral fracture of shaft of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.243B	Displaced spiral fracture of shaft of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.243C	Displaced spiral fracture of shaft of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.244A	Nondisplaced spiral fracture of shaft of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.244B	Nondisplaced spiral fracture of shaft of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.244C	Nondisplaced spiral fracture of shaft of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.245A	Nondisplaced spiral fracture of shaft of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.245B	Nondisplaced spiral fracture of shaft of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.245C	Nondisplaced spiral fracture of shaft of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.246A	Nondisplaced spiral fracture of shaft of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.246B	Nondisplaced spiral fracture of shaft of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.246C	Nondisplaced spiral fracture of shaft of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.251A	Displaced comminuted fracture of shaft of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.251B	Displaced comminuted fracture of shaft of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.251C	Displaced comminuted fracture of shaft of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.252A	Displaced comminuted fracture of shaft of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.252B	Displaced comminuted fracture of shaft of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.252C	Displaced comminuted fracture of shaft of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.253A	Displaced comminuted fracture of shaft of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.253B	Displaced comminuted fracture of shaft of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.253C	Displaced comminuted fracture of shaft of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.254A	Nondisplaced comminuted fracture of shaft of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.254B	Nondisplaced comminuted fracture of shaft of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.254C	Nondisplaced comminuted fracture of shaft of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S82.255A	Nondisplaced comminuted fracture of shaft of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.255B	Nondisplaced comminuted fracture of shaft of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.255C	Nondisplaced comminuted fracture of shaft of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.256A	Nondisplaced comminuted fracture of shaft of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.256B	Nondisplaced comminuted fracture of shaft of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.256C	Nondisplaced comminuted fracture of shaft of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.261A	Displaced segmental fracture of shaft of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.261B	Displaced segmental fracture of shaft of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.261C	Displaced segmental fracture of shaft of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.262A	Displaced segmental fracture of shaft of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.262B	Displaced segmental fracture of shaft of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.262C	Displaced segmental fracture of shaft of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.263A	Displaced segmental fracture of shaft of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.263B	Displaced segmental fracture of shaft of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.263C	Displaced segmental fracture of shaft of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.264A	Nondisplaced segmental fracture of shaft of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.264B	Nondisplaced segmental fracture of shaft of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.264C	Nondisplaced segmental fracture of shaft of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.265A	Nondisplaced segmental fracture of shaft of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.265B	Nondisplaced segmental fracture of shaft of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.265C	Nondisplaced segmental fracture of shaft of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.266A	Nondisplaced segmental fracture of shaft of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.266B	Nondisplaced segmental fracture of shaft of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.266C	Nondisplaced segmental fracture of shaft of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.291A	Other fracture of shaft of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.291B	Other fracture of shaft of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S82.291C	Other fracture of shaft of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.292A	Other fracture of shaft of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.292B	Other fracture of shaft of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.292C	Other fracture of shaft of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.299A	Other fracture of shaft of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.299B	Other fracture of shaft of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.299C	Other fracture of shaft of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.301A	Unspecified fracture of lower end of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.301B	Unspecified fracture of lower end of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.301C	Unspecified fracture of lower end of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.302A	Unspecified fracture of lower end of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.302B	Unspecified fracture of lower end of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.302C	Unspecified fracture of lower end of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.309A	Unspecified fracture of lower end of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.309B	Unspecified fracture of lower end of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.309C	Unspecified fracture of lower end of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.311A	Torus fracture of lower end of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.312A	Torus fracture of lower end of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.319A	Torus fracture of lower end of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.391A	Other fracture of lower end of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.391B	Other fracture of lower end of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.391C	Other fracture of lower end of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.392A	Other fracture of lower end of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.392B	Other fracture of lower end of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.392C	Other fracture of lower end of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.399A	Other fracture of lower end of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.399B	Other fracture of lower end of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.399C	Other fracture of lower end of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.401A	Unspecified fracture of shaft of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.401B	Unspecified fracture of shaft of right fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.401C	Unspecified fracture of shaft of right fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.402A	Unspecified fracture of shaft of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S82.402B	Unspecified fracture of shaft of left fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.402C	Unspecified fracture of shaft of left fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.409A	Unspecified fracture of shaft of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.409B	Unspecified fracture of shaft of unspecified fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.409C	Unspecified fracture of shaft of unspecified fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.421A	Displaced transverse fracture of shaft of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.421B	Displaced transverse fracture of shaft of right fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.421C	Displaced transverse fracture of shaft of right fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.422A	Displaced transverse fracture of shaft of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.422B	Displaced transverse fracture of shaft of left fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.422C	Displaced transverse fracture of shaft of left fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.423A	Displaced transverse fracture of shaft of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.423B	Displaced transverse fracture of shaft of unspecified fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.423C	Displaced transverse fracture of shaft of unspecified fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.424A	Nondisplaced transverse fracture of shaft of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.424B	Nondisplaced transverse fracture of shaft of right fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.424C	Nondisplaced transverse fracture of shaft of right fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.425A	Nondisplaced transverse fracture of shaft of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.425B	Nondisplaced transverse fracture of shaft of left fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.425C	Nondisplaced transverse fracture of shaft of left fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.426A	Nondisplaced transverse fracture of shaft of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.426B	Nondisplaced transverse fracture of shaft of unspecified fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.426C	Nondisplaced transverse fracture of shaft of unspecified fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.431A	Displaced oblique fracture of shaft of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.431B	Displaced oblique fracture of shaft of right fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.431C	Displaced oblique fracture of shaft of right fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S82.432A	Displaced oblique fracture of shaft of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.432B	Displaced oblique fracture of shaft of left fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.432C	Displaced oblique fracture of shaft of left fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.433A	Displaced oblique fracture of shaft of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.433B	Displaced oblique fracture of shaft of unspecified fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.433C	Displaced oblique fracture of shaft of unspecified fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.434A	Nondisplaced oblique fracture of shaft of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.434B	Nondisplaced oblique fracture of shaft of right fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.434C	Nondisplaced oblique fracture of shaft of right fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.435A	Nondisplaced oblique fracture of shaft of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.435B	Nondisplaced oblique fracture of shaft of left fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.435C	Nondisplaced oblique fracture of shaft of left fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.436A	Nondisplaced oblique fracture of shaft of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.436B	Nondisplaced oblique fracture of shaft of unspecified fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.436C	Nondisplaced oblique fracture of shaft of unspecified fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.441A	Displaced spiral fracture of shaft of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.441B	Displaced spiral fracture of shaft of right fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.441C	Displaced spiral fracture of shaft of right fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.442A	Displaced spiral fracture of shaft of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.442B	Displaced spiral fracture of shaft of left fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.442C	Displaced spiral fracture of shaft of left fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.443A	Displaced spiral fracture of shaft of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.443B	Displaced spiral fracture of shaft of unspecified fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.443C	Displaced spiral fracture of shaft of unspecified fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.444A	Nondisplaced spiral fracture of shaft of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.444B	Nondisplaced spiral fracture of shaft of right fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S82.444C	Nondisplaced spiral fracture of shaft of right fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.445A	Nondisplaced spiral fracture of shaft of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.445B	Nondisplaced spiral fracture of shaft of left fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.445C	Nondisplaced spiral fracture of shaft of left fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.446A	Nondisplaced spiral fracture of shaft of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.446B	Nondisplaced spiral fracture of shaft of unspecified fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.446C	Nondisplaced spiral fracture of shaft of unspecified fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.451A	Displaced comminuted fracture of shaft of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.451B	Displaced comminuted fracture of shaft of right fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.451C	Displaced comminuted fracture of shaft of right fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.452A	Displaced comminuted fracture of shaft of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.452B	Displaced comminuted fracture of shaft of left fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.452C	Displaced comminuted fracture of shaft of left fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.453A	Displaced comminuted fracture of shaft of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.453B	Displaced comminuted fracture of shaft of unspecified fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.453C	Displaced comminuted fracture of shaft of unspecified fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.454A	Nondisplaced comminuted fracture of shaft of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.454B	Nondisplaced comminuted fracture of shaft of right fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.454C	Nondisplaced comminuted fracture of shaft of right fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.455A	Nondisplaced comminuted fracture of shaft of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.455B	Nondisplaced comminuted fracture of shaft of left fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.455C	Nondisplaced comminuted fracture of shaft of left fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.456A	Nondisplaced comminuted fracture of shaft of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.456B	Nondisplaced comminuted fracture of shaft of unspecified fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.456C	Nondisplaced comminuted fracture of shaft of unspecified fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S82.461A	Displaced segmental fracture of shaft of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.461B	Displaced segmental fracture of shaft of right fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.461C	Displaced segmental fracture of shaft of right fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.462A	Displaced segmental fracture of shaft of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.462B	Displaced segmental fracture of shaft of left fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.462C	Displaced segmental fracture of shaft of left fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.463A	Displaced segmental fracture of shaft of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.463B	Displaced segmental fracture of shaft of unspecified fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.463C	Displaced segmental fracture of shaft of unspecified fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.464A	Nondisplaced segmental fracture of shaft of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.464B	Nondisplaced segmental fracture of shaft of right fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.464C	Nondisplaced segmental fracture of shaft of right fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.465A	Nondisplaced segmental fracture of shaft of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.465B	Nondisplaced segmental fracture of shaft of left fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.465C	Nondisplaced segmental fracture of shaft of left fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.466A	Nondisplaced segmental fracture of shaft of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.466B	Nondisplaced segmental fracture of shaft of unspecified fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.466C	Nondisplaced segmental fracture of shaft of unspecified fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.491A	Other fracture of shaft of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.491B	Other fracture of shaft of right fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.491C	Other fracture of shaft of right fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.492A	Other fracture of shaft of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.492B	Other fracture of shaft of left fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.492C	Other fracture of shaft of left fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.499A	Other fracture of shaft of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.499B	Other fracture of shaft of unspecified fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.499C	Other fracture of shaft of unspecified fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.51XA	Displaced fracture of medial malleolus of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S82.51XB	Displaced fracture of medial malleolus of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.51XC	Displaced fracture of medial malleolus of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.52XA	Displaced fracture of medial malleolus of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.52XB	Displaced fracture of medial malleolus of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.52XC	Displaced fracture of medial malleolus of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.53XA	Displaced fracture of medial malleolus of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.53XB	Displaced fracture of medial malleolus of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.53XC	Displaced fracture of medial malleolus of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.54XA	Nondisplaced fracture of medial malleolus of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.54XB	Nondisplaced fracture of medial malleolus of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.54XC	Nondisplaced fracture of medial malleolus of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.55XA	Nondisplaced fracture of medial malleolus of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.55XB	Nondisplaced fracture of medial malleolus of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.55XC	Nondisplaced fracture of medial malleolus of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.56XA	Nondisplaced fracture of medial malleolus of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.56XB	Nondisplaced fracture of medial malleolus of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.56XC	Nondisplaced fracture of medial malleolus of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.61XA	Displaced fracture of lateral malleolus of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.61XB	Displaced fracture of lateral malleolus of right fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.61XC	Displaced fracture of lateral malleolus of right fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.62XA	Displaced fracture of lateral malleolus of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.62XB	Displaced fracture of lateral malleolus of left fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.62XC	Displaced fracture of lateral malleolus of left fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.63XA	Displaced fracture of lateral malleolus of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.63XB	Displaced fracture of lateral malleolus of unspecified fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S82.63XC	Displaced fracture of lateral malleolus of unspecified fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.64XA	Nondisplaced fracture of lateral malleolus of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.64XB	Nondisplaced fracture of lateral malleolus of right fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.64XC	Nondisplaced fracture of lateral malleolus of right fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.65XA	Nondisplaced fracture of lateral malleolus of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.65XB	Nondisplaced fracture of lateral malleolus of left fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.65XC	Nondisplaced fracture of lateral malleolus of left fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.66XA	Nondisplaced fracture of lateral malleolus of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.66XB	Nondisplaced fracture of lateral malleolus of unspecified fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.66XC	Nondisplaced fracture of lateral malleolus of unspecified fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.811A	Torus fracture of upper end of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.812A	Torus fracture of upper end of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.819A	Torus fracture of upper end of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.821A	Torus fracture of lower end of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.822A	Torus fracture of lower end of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.829A	Torus fracture of lower end of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.831A	Other fracture of upper and lower end of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.831B	Other fracture of upper and lower end of right fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.831C	Other fracture of upper and lower end of right fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.832A	Other fracture of upper and lower end of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.832B	Other fracture of upper and lower end of left fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.832C	Other fracture of upper and lower end of left fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.839A	Other fracture of upper and lower end of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.839B	Other fracture of upper and lower end of unspecified fibula, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.839C	Other fracture of upper and lower end of unspecified fibula, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.841A	Displaced bimalleolar fracture of right lower leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.841B	Displaced bimalleolar fracture of right lower leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.841C	Displaced bimalleolar fracture of right lower leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.842A	Displaced bimalleolar fracture of left lower leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S82.842B	Displaced bimalleolar fracture of left lower leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.842C	Displaced bimalleolar fracture of left lower leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.843A	Displaced bimalleolar fracture of unspecified lower leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.843B	Displaced bimalleolar fracture of unspecified lower leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.843C	Displaced bimalleolar fracture of unspecified lower leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.844A	Nondisplaced bimalleolar fracture of right lower leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.844B	Nondisplaced bimalleolar fracture of right lower leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.844C	Nondisplaced bimalleolar fracture of right lower leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.845A	Nondisplaced bimalleolar fracture of left lower leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.845B	Nondisplaced bimalleolar fracture of left lower leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.845C	Nondisplaced bimalleolar fracture of left lower leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.846A	Nondisplaced bimalleolar fracture of unspecified lower leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.846B	Nondisplaced bimalleolar fracture of unspecified lower leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.846C	Nondisplaced bimalleolar fracture of unspecified lower leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.851A	Displaced trimalleolar fracture of right lower leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.851B	Displaced trimalleolar fracture of right lower leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.851C	Displaced trimalleolar fracture of right lower leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.852A	Displaced trimalleolar fracture of left lower leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.852B	Displaced trimalleolar fracture of left lower leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.852C	Displaced trimalleolar fracture of left lower leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.853A	Displaced trimalleolar fracture of unspecified lower leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.853B	Displaced trimalleolar fracture of unspecified lower leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.853C	Displaced trimalleolar fracture of unspecified lower leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.854A	Nondisplaced trimalleolar fracture of right lower leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.854B	Nondisplaced trimalleolar fracture of right lower leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.854C	Nondisplaced trimalleolar fracture of right lower leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S82.855A	Nondisplaced trimalleolar fracture of left lower leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.855B	Nondisplaced trimalleolar fracture of left lower leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.855C	Nondisplaced trimalleolar fracture of left lower leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.856A	Nondisplaced trimalleolar fracture of unspecified lower leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.856B	Nondisplaced trimalleolar fracture of unspecified lower leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.856C	Nondisplaced trimalleolar fracture of unspecified lower leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.861A	Displaced Maisonneuve's fracture of right leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.861B	Displaced Maisonneuve's fracture of right leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.861C	Displaced Maisonneuve's fracture of right leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.862A	Displaced Maisonneuve's fracture of left leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.862B	Displaced Maisonneuve's fracture of left leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.862C	Displaced Maisonneuve's fracture of left leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.863A	Displaced Maisonneuve's fracture of unspecified leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.863B	Displaced Maisonneuve's fracture of unspecified leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.863C	Displaced Maisonneuve's fracture of unspecified leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.864A	Nondisplaced Maisonneuve's fracture of right leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.864B	Nondisplaced Maisonneuve's fracture of right leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.864C	Nondisplaced Maisonneuve's fracture of right leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.865A	Nondisplaced Maisonneuve's fracture of left leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.865B	Nondisplaced Maisonneuve's fracture of left leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.865C	Nondisplaced Maisonneuve's fracture of left leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.866A	Nondisplaced Maisonneuve's fracture of unspecified leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.866B	Nondisplaced Maisonneuve's fracture of unspecified leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.866C	Nondisplaced Maisonneuve's fracture of unspecified leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.871A	Displaced pilon fracture of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.871B	Displaced pilon fracture of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.871C	Displaced pilon fracture of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.872A	Displaced pilon fracture of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.872B	Displaced pilon fracture of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S82.872C	Displaced pilon fracture of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.873A	Displaced pilon fracture of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.873B	Displaced pilon fracture of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.873C	Displaced pilon fracture of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.874A	Nondisplaced pilon fracture of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.874B	Nondisplaced pilon fracture of right tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.874C	Nondisplaced pilon fracture of right tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.875A	Nondisplaced pilon fracture of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.875B	Nondisplaced pilon fracture of left tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.875C	Nondisplaced pilon fracture of left tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.876A	Nondisplaced pilon fracture of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.876B	Nondisplaced pilon fracture of unspecified tibia, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.876C	Nondisplaced pilon fracture of unspecified tibia, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.891A	Other fracture of right lower leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.891B	Other fracture of right lower leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.891C	Other fracture of right lower leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.892A	Other fracture of left lower leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.892B	Other fracture of left lower leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.892C	Other fracture of left lower leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.899A	Other fracture of unspecified lower leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.899B	Other fracture of unspecified lower leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.899C	Other fracture of unspecified lower leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.90XA	Unspecified fracture of unspecified lower leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.90XB	Unspecified fracture of unspecified lower leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.90XC	Unspecified fracture of unspecified lower leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.91XA	Unspecified fracture of right lower leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.91XB	Unspecified fracture of right lower leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.91XC	Unspecified fracture of right lower leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S82.92XA	Unspecified fracture of left lower leg, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S82.92XB	Unspecified fracture of left lower leg, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S82.92XC	Unspecified fracture of left lower leg, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S87.00XA	Crushing injury of unspecified knee, initial encounter	ICD-10-CM	Diagnosis
S87.01XA	Crushing injury of right knee, initial encounter	ICD-10-CM	Diagnosis
S87.02XA	Crushing injury of left knee, initial encounter	ICD-10-CM	Diagnosis
S87.80XA	Crushing injury of unspecified lower leg, initial encounter	ICD-10-CM	Diagnosis
S87.81XA	Crushing injury of right lower leg, initial encounter	ICD-10-CM	Diagnosis
S87.82XA	Crushing injury of left lower leg, initial encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
S89.001A	Unspecified physeal fracture of upper end of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.002A	Unspecified physeal fracture of upper end of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.009A	Unspecified physeal fracture of upper end of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.011A	Salter-Harris Type I physeal fracture of upper end of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.012A	Salter-Harris Type I physeal fracture of upper end of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.019A	Salter-Harris Type I physeal fracture of upper end of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.021A	Salter-Harris Type II physeal fracture of upper end of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.022A	Salter-Harris Type II physeal fracture of upper end of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.029A	Salter-Harris Type II physeal fracture of upper end of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.031A	Salter-Harris Type III physeal fracture of upper end of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.032A	Salter-Harris Type III physeal fracture of upper end of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.039A	Salter-Harris Type III physeal fracture of upper end of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.041A	Salter-Harris Type IV physeal fracture of upper end of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.042A	Salter-Harris Type IV physeal fracture of upper end of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.049A	Salter-Harris Type IV physeal fracture of upper end of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.091A	Other physeal fracture of upper end of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.092A	Other physeal fracture of upper end of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.099A	Other physeal fracture of upper end of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.101A	Unspecified physeal fracture of lower end of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.102A	Unspecified physeal fracture of lower end of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.109A	Unspecified physeal fracture of lower end of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.111A	Salter-Harris Type I physeal fracture of lower end of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.112A	Salter-Harris Type I physeal fracture of lower end of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.119A	Salter-Harris Type I physeal fracture of lower end of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.121A	Salter-Harris Type II physeal fracture of lower end of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.122A	Salter-Harris Type II physeal fracture of lower end of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S89.129A	Salter-Harris Type II physeal fracture of lower end of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.131A	Salter-Harris Type III physeal fracture of lower end of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.132A	Salter-Harris Type III physeal fracture of lower end of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.139A	Salter-Harris Type III physeal fracture of lower end of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.141A	Salter-Harris Type IV physeal fracture of lower end of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.142A	Salter-Harris Type IV physeal fracture of lower end of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.149A	Salter-Harris Type IV physeal fracture of lower end of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.191A	Other physeal fracture of lower end of right tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.192A	Other physeal fracture of lower end of left tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.199A	Other physeal fracture of lower end of unspecified tibia, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.201A	Unspecified physeal fracture of upper end of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.202A	Unspecified physeal fracture of upper end of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.209A	Unspecified physeal fracture of upper end of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.211A	Salter-Harris Type I physeal fracture of upper end of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.212A	Salter-Harris Type I physeal fracture of upper end of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.219A	Salter-Harris Type I physeal fracture of upper end of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.221A	Salter-Harris Type II physeal fracture of upper end of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.222A	Salter-Harris Type II physeal fracture of upper end of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.229A	Salter-Harris Type II physeal fracture of upper end of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.291A	Other physeal fracture of upper end of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.292A	Other physeal fracture of upper end of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.299A	Other physeal fracture of upper end of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.301A	Unspecified physeal fracture of lower end of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.302A	Unspecified physeal fracture of lower end of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.309A	Unspecified physeal fracture of lower end of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.311A	Salter-Harris Type I physeal fracture of lower end of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.312A	Salter-Harris Type I physeal fracture of lower end of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S89.319A	Salter-Harris Type I physeal fracture of lower end of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.321A	Salter-Harris Type II physeal fracture of lower end of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.322A	Salter-Harris Type II physeal fracture of lower end of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.329A	Salter-Harris Type II physeal fracture of lower end of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.391A	Other physeal fracture of lower end of right fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.392A	Other physeal fracture of lower end of left fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S89.399A	Other physeal fracture of lower end of unspecified fibula, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S97.00XA	Crushing injury of unspecified ankle, initial encounter	ICD-10-CM	Diagnosis
S97.01XA	Crushing injury of right ankle, initial encounter	ICD-10-CM	Diagnosis
S97.02XA	Crushing injury of left ankle, initial encounter	ICD-10-CM	Diagnosis
S97.101A	Crushing injury of unspecified right toe(s), initial encounter	ICD-10-CM	Diagnosis
S97.102A	Crushing injury of unspecified left toe(s), initial encounter	ICD-10-CM	Diagnosis
S97.109A	Crushing injury of unspecified toe(s), initial encounter	ICD-10-CM	Diagnosis
S97.111A	Crushing injury of right great toe, initial encounter	ICD-10-CM	Diagnosis
S97.112A	Crushing injury of left great toe, initial encounter	ICD-10-CM	Diagnosis
S97.119A	Crushing injury of unspecified great toe, initial encounter	ICD-10-CM	Diagnosis
S97.121A	Crushing injury of right lesser toe(s), initial encounter	ICD-10-CM	Diagnosis
S97.122A	Crushing injury of left lesser toe(s), initial encounter	ICD-10-CM	Diagnosis
S97.129A	Crushing injury of unspecified lesser toe(s), initial encounter	ICD-10-CM	Diagnosis
S97.80XA	Crushing injury of unspecified foot, initial encounter	ICD-10-CM	Diagnosis
S97.81XA	Crushing injury of right foot, initial encounter	ICD-10-CM	Diagnosis
S97.82XA	Crushing injury of left foot, initial encounter	ICD-10-CM	Diagnosis
T14.8XXA	Other injury of unspecified body region, initial encounter	ICD-10-CM	Diagnosis
T79.4XXA	Traumatic shock, initial encounter	ICD-10-CM	Diagnosis
T79.5XXA	Traumatic anuria, initial encounter	ICD-10-CM	Diagnosis
T79.7XXA	Traumatic subcutaneous emphysema, initial encounter	ICD-10-CM	Diagnosis
T82.817A	Embolism due to cardiac prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T82.818A	Embolism due to vascular prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T82.827A	Fibrosis due to cardiac prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T82.828A	Fibrosis due to vascular prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T82.837A	Hemorrhage due to cardiac prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T82.838A	Hemorrhage due to vascular prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T82.847A	Pain due to cardiac prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T82.848A	Pain due to vascular prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T82.855A	Stenosis of coronary artery stent, initial encounter	ICD-10-CM	Diagnosis
T82.856A	Stenosis of peripheral vascular stent, initial encounter	ICD-10-CM	Diagnosis
T82.857A	Stenosis of other cardiac prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T82.858A	Stenosis of other vascular prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T82.867A	Thrombosis due to cardiac prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T82.868A	Thrombosis due to vascular prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T82.897A	Other specified complication of cardiac prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T82.898A	Other specified complication of vascular prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
T82.9XXA	Unspecified complication of cardiac and vascular prosthetic device, implant and graft, initial encounter	ICD-10-CM	Diagnosis
T83.81XA	Embolism due to genitourinary prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T83.82XA	Fibrosis due to genitourinary prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T83.83XA	Hemorrhage due to genitourinary prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T83.84XA	Pain due to genitourinary prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T83.85XA	Stenosis due to genitourinary prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T83.86XA	Thrombosis due to genitourinary prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T83.89XA	Other specified complication of genitourinary prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T83.9XXA	Unspecified complication of genitourinary prosthetic device, implant and graft, initial encounter	ICD-10-CM	Diagnosis
T84.81XA	Embolism due to internal orthopedic prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T84.82XA	Fibrosis due to internal orthopedic prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T84.83XA	Hemorrhage due to internal orthopedic prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T84.84XA	Pain due to internal orthopedic prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T84.85XA	Stenosis due to internal orthopedic prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T84.86XA	Thrombosis due to internal orthopedic prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T84.89XA	Other specified complication of internal orthopedic prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T84.9XXA	Unspecified complication of internal orthopedic prosthetic device, implant and graft, initial encounter	ICD-10-CM	Diagnosis
T85.810A	Embolism due to nervous system prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T85.818A	Embolism due to other internal prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T85.820A	Fibrosis due to nervous system prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T85.828A	Fibrosis due to other internal prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T85.830A	Hemorrhage due to nervous system prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T85.838A	Hemorrhage due to other internal prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T85.840A	Pain due to nervous system prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T85.848A	Pain due to other internal prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T85.850A	Stenosis due to nervous system prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T85.858A	Stenosis due to other internal prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T85.860A	Thrombosis due to nervous system prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
T85.868A	Thrombosis due to other internal prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T85.890A	Other specified complication of nervous system prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T85.898A	Other specified complication of other internal prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T85.9XXA	Unspecified complication of internal prosthetic device, implant and graft, initial encounter	ICD-10-CM	Diagnosis
T86.848	Other complications of corneal transplant	ICD-10-CM	Diagnosis
T86.849	Unspecified complication of corneal transplant	ICD-10-CM	Diagnosis
T88.8XXA	Other specified complications of surgical and medical care, not elsewhere classified, initial encounter	ICD-10-CM	Diagnosis
V05.00XA	Pedestrian on foot injured in collision with railway train or railway vehicle in nontraffic accident, initial encounter	ICD-10-CM	Diagnosis
V05.00XD	Pedestrian on foot injured in collision with railway train or railway vehicle in nontraffic accident, subsequent encounter	ICD-10-CM	Diagnosis
V05.01XA	Pedestrian on roller-skates injured in collision with railway train or railway vehicle in nontraffic accident, initial encounter	ICD-10-CM	Diagnosis
V05.01XD	Pedestrian on roller-skates injured in collision with railway train or railway vehicle in nontraffic accident, subsequent encounter	ICD-10-CM	Diagnosis
V05.02XA	Pedestrian on skateboard injured in collision with railway train or railway vehicle in nontraffic accident, initial encounter	ICD-10-CM	Diagnosis
V05.02XD	Pedestrian on skateboard injured in collision with railway train or railway vehicle in nontraffic accident, subsequent encounter	ICD-10-CM	Diagnosis
V05.09XA	Pedestrian with other conveyance injured in collision with railway train or railway vehicle in nontraffic accident, initial encounter	ICD-10-CM	Diagnosis
V05.09XD	Pedestrian with other conveyance injured in collision with railway train or railway vehicle in nontraffic accident, subsequent encounter	ICD-10-CM	Diagnosis
V15.2XXA	Unspecified pedal cyclist injured in collision with railway train or railway vehicle in nontraffic accident, initial encounter	ICD-10-CM	Diagnosis
V81.2XXA	Occupant of railway train or railway vehicle injured in collision with or hit by rolling stock, initial encounter	ICD-10-CM	Diagnosis
W11.XXXA	Fall on and from ladder, initial encounter	ICD-10-CM	Diagnosis
W11.XXXD	Fall on and from ladder, subsequent encounter	ICD-10-CM	Diagnosis
W12.XXXA	Fall on and from scaffolding, initial encounter	ICD-10-CM	Diagnosis
W12.XXXD	Fall on and from scaffolding, subsequent encounter	ICD-10-CM	Diagnosis
W13.0XXA	Fall from, out of or through balcony, initial encounter	ICD-10-CM	Diagnosis
W13.0XXD	Fall from, out of or through balcony, subsequent encounter	ICD-10-CM	Diagnosis
W13.1XXA	Fall from, out of or through bridge, initial encounter	ICD-10-CM	Diagnosis
W13.1XXD	Fall from, out of or through bridge, subsequent encounter	ICD-10-CM	Diagnosis
W13.2XXA	Fall from, out of or through roof, initial encounter	ICD-10-CM	Diagnosis
W13.2XXD	Fall from, out of or through roof, subsequent encounter	ICD-10-CM	Diagnosis
W13.3XXA	Fall through floor, initial encounter	ICD-10-CM	Diagnosis
W13.3XXD	Fall through floor, subsequent encounter	ICD-10-CM	Diagnosis
W13.4XXA	Fall from, out of or through window, initial encounter	ICD-10-CM	Diagnosis
W13.4XXD	Fall from, out of or through window, subsequent encounter	ICD-10-CM	Diagnosis
W13.8XXA	Fall from, out of or through other building or structure, initial encounter	ICD-10-CM	Diagnosis
W13.8XXD	Fall from, out of or through other building or structure, subsequent encounter	ICD-10-CM	Diagnosis
W13.9XXA	Fall from, out of or through building, not otherwise specified, initial encounter	ICD-10-CM	Diagnosis
W13.9XXD	Fall from, out of or through building, not otherwise specified, subsequent encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
W16.011A	Fall into swimming pool striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.011D	Fall into swimming pool striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.012A	Fall into swimming pool striking water surface causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.012D	Fall into swimming pool striking water surface causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.021A	Fall into swimming pool striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.021D	Fall into swimming pool striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.022A	Fall into swimming pool striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.022D	Fall into swimming pool striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.031A	Fall into swimming pool striking wall causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.031D	Fall into swimming pool striking wall causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.032A	Fall into swimming pool striking wall causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.032D	Fall into swimming pool striking wall causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.111A	Fall into natural body of water striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.111D	Fall into natural body of water striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.112A	Fall into natural body of water striking water surface causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.112D	Fall into natural body of water striking water surface causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.121A	Fall into natural body of water striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.121D	Fall into natural body of water striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.122A	Fall into natural body of water striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.122D	Fall into natural body of water striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.131A	Fall into natural body of water striking side causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.131D	Fall into natural body of water striking side causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.132A	Fall into natural body of water striking side causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.132D	Fall into natural body of water striking side causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.211A	Fall in (into) filled bathtub causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.211D	Fall in (into) filled bathtub causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.212A	Fall in (into) filled bathtub causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.212D	Fall in (into) filled bathtub causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.221A	Fall in (into) bucket of water causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.221D	Fall in (into) bucket of water causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.222A	Fall in (into) bucket of water causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.222D	Fall in (into) bucket of water causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.311A	Fall into other water striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
W16.311D	Fall into other water striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.312A	Fall into other water striking water surface causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.312D	Fall into other water striking water surface causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.321A	Fall into other water striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.321D	Fall into other water striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.322A	Fall into other water striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.322D	Fall into other water striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.331A	Fall into other water striking wall causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.331D	Fall into other water striking wall causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.332A	Fall into other water striking wall causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.332D	Fall into other water striking wall causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.41XA	Fall into unspecified water causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.41XD	Fall into unspecified water causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.42XA	Fall into unspecified water causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.42XD	Fall into unspecified water causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.511A	Jumping or diving into swimming pool striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.511D	Jumping or diving into swimming pool striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.512A	Jumping or diving into swimming pool striking water surface causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.512D	Jumping or diving into swimming pool striking water surface causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.521A	Jumping or diving into swimming pool striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.521D	Jumping or diving into swimming pool striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.522A	Jumping or diving into swimming pool striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.522D	Jumping or diving into swimming pool striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.531A	Jumping or diving into swimming pool striking wall causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.531D	Jumping or diving into swimming pool striking wall causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.532A	Jumping or diving into swimming pool striking wall causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.532D	Jumping or diving into swimming pool striking wall causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.611A	Jumping or diving into natural body of water striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.611D	Jumping or diving into natural body of water striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.612A	Jumping or diving into natural body of water striking water surface causing other injury, initial encounter	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
W16.612D	Jumping or diving into natural body of water striking water surface causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.621A	Jumping or diving into natural body of water striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.621D	Jumping or diving into natural body of water striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.622A	Jumping or diving into natural body of water striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.622D	Jumping or diving into natural body of water striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.711A	Jumping or diving from boat striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.711D	Jumping or diving from boat striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.712A	Jumping or diving from boat striking water surface causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.712D	Jumping or diving from boat striking water surface causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.721A	Jumping or diving from boat striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.721D	Jumping or diving from boat striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.722A	Jumping or diving from boat striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.722D	Jumping or diving from boat striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.811A	Jumping or diving into other water striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.811D	Jumping or diving into other water striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.812A	Jumping or diving into other water striking water surface causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.812D	Jumping or diving into other water striking water surface causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.821A	Jumping or diving into other water striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.821D	Jumping or diving into other water striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.822A	Jumping or diving into other water striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.822D	Jumping or diving into other water striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.831A	Jumping or diving into other water striking wall causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.831D	Jumping or diving into other water striking wall causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.832A	Jumping or diving into other water striking wall causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.832D	Jumping or diving into other water striking wall causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.91XA	Jumping or diving into unspecified water causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
W16.91XD	Jumping or diving into unspecified water causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.92XA	Jumping or diving into unspecified water causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.92XD	Jumping or diving into unspecified water causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W17.0XXA	Fall into well, initial encounter	ICD-10-CM	Diagnosis
W17.0XXD	Fall into well, subsequent encounter	ICD-10-CM	Diagnosis
W17.1XXA	Fall into storm drain or manhole, initial encounter	ICD-10-CM	Diagnosis
W17.1XXD	Fall into storm drain or manhole, subsequent encounter	ICD-10-CM	Diagnosis
W17.2XXA	Fall into hole, initial encounter	ICD-10-CM	Diagnosis
W17.2XXD	Fall into hole, subsequent encounter	ICD-10-CM	Diagnosis
W17.3XXA	Fall into empty swimming pool, initial encounter	ICD-10-CM	Diagnosis
W17.3XXD	Fall into empty swimming pool, subsequent encounter	ICD-10-CM	Diagnosis
W17.4XXA	Fall from dock, initial encounter	ICD-10-CM	Diagnosis
W17.4XXD	Fall from dock, subsequent encounter	ICD-10-CM	Diagnosis
W32.0XXA	Accidental handgun discharge, initial encounter	ICD-10-CM	Diagnosis
W32.0XXD	Accidental handgun discharge, subsequent encounter	ICD-10-CM	Diagnosis
W32.1XXA	Accidental handgun malfunction, initial encounter	ICD-10-CM	Diagnosis
W32.1XXD	Accidental handgun malfunction, subsequent encounter	ICD-10-CM	Diagnosis
W33.00XA	Accidental discharge of unspecified larger firearm, initial encounter	ICD-10-CM	Diagnosis
W33.00XD	Accidental discharge of unspecified larger firearm, subsequent encounter	ICD-10-CM	Diagnosis
W33.01XA	Accidental discharge of shotgun, initial encounter	ICD-10-CM	Diagnosis
W33.01XD	Accidental discharge of shotgun, subsequent encounter	ICD-10-CM	Diagnosis
W33.02XA	Accidental discharge of hunting rifle, initial encounter	ICD-10-CM	Diagnosis
W33.02XD	Accidental discharge of hunting rifle, subsequent encounter	ICD-10-CM	Diagnosis
W33.03XA	Accidental discharge of machine gun, initial encounter	ICD-10-CM	Diagnosis
W33.03XD	Accidental discharge of machine gun, subsequent encounter	ICD-10-CM	Diagnosis
W33.09XA	Accidental discharge of other larger firearm, initial encounter	ICD-10-CM	Diagnosis
W33.09XD	Accidental discharge of other larger firearm, subsequent encounter	ICD-10-CM	Diagnosis
W33.10XA	Accidental malfunction of unspecified larger firearm, initial encounter	ICD-10-CM	Diagnosis
W33.10XD	Accidental malfunction of unspecified larger firearm, subsequent encounter	ICD-10-CM	Diagnosis
W33.11XA	Accidental malfunction of shotgun, initial encounter	ICD-10-CM	Diagnosis
W33.11XD	Accidental malfunction of shotgun, subsequent encounter	ICD-10-CM	Diagnosis
W33.12XA	Accidental malfunction of hunting rifle, initial encounter	ICD-10-CM	Diagnosis
W33.12XD	Accidental malfunction of hunting rifle, subsequent encounter	ICD-10-CM	Diagnosis
W33.13XA	Accidental malfunction of machine gun, initial encounter	ICD-10-CM	Diagnosis
W33.13XD	Accidental malfunction of machine gun, subsequent encounter	ICD-10-CM	Diagnosis
W33.19XA	Accidental malfunction of other larger firearm, initial encounter	ICD-10-CM	Diagnosis
W33.19XD	Accidental malfunction of other larger firearm, subsequent encounter	ICD-10-CM	Diagnosis
W34.00XA	Accidental discharge from unspecified firearms or gun, initial encounter	ICD-10-CM	Diagnosis
W34.00XD	Accidental discharge from unspecified firearms or gun, subsequent encounter	ICD-10-CM	Diagnosis
W34.010A	Accidental discharge of airgun, initial encounter	ICD-10-CM	Diagnosis
W34.010D	Accidental discharge of airgun, subsequent encounter	ICD-10-CM	Diagnosis
W34.011A	Accidental discharge of paintball gun, initial encounter	ICD-10-CM	Diagnosis
W34.011D	Accidental discharge of paintball gun, subsequent encounter	ICD-10-CM	Diagnosis
W34.018A	Accidental discharge of other gas, air or spring-operated gun, initial encounter	ICD-10-CM	Diagnosis
W34.018D	Accidental discharge of other gas, air or spring-operated gun, subsequent encounter	ICD-10-CM	Diagnosis
W34.09XA	Accidental discharge from other specified firearms, initial encounter	ICD-10-CM	Diagnosis
W34.09XD	Accidental discharge from other specified firearms, subsequent encounter	ICD-10-CM	Diagnosis
W34.10XA	Accidental malfunction from unspecified firearms or gun, initial encounter	ICD-10-CM	Diagnosis
W34.10XD	Accidental malfunction from unspecified firearms or gun, subsequent encounter	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
W34.110A	Accidental malfunction of airgun, initial encounter	ICD-10-CM	Diagnosis
W34.110D	Accidental malfunction of airgun, subsequent encounter	ICD-10-CM	Diagnosis
W34.111A	Accidental malfunction of paintball gun, initial encounter	ICD-10-CM	Diagnosis
W34.111D	Accidental malfunction of paintball gun, subsequent encounter	ICD-10-CM	Diagnosis
W34.118A	Accidental malfunction of other gas, air or spring-operated gun, initial encounter	ICD-10-CM	Diagnosis
W34.118D	Accidental malfunction of other gas, air or spring-operated gun, subsequent encounter	ICD-10-CM	Diagnosis
W34.19XA	Accidental malfunction from other specified firearms, initial encounter	ICD-10-CM	Diagnosis
W34.19XD	Accidental malfunction from other specified firearms, subsequent encounter	ICD-10-CM	Diagnosis
W39.XXXA	Discharge of firework, initial encounter	ICD-10-CM	Diagnosis
W39.XXXD	Discharge of firework, subsequent encounter	ICD-10-CM	Diagnosis
W40.0XXA	Explosion of blasting material, initial encounter	ICD-10-CM	Diagnosis
W40.0XXD	Explosion of blasting material, subsequent encounter	ICD-10-CM	Diagnosis
W40.1XXA	Explosion of explosive gases, initial encounter	ICD-10-CM	Diagnosis
W40.1XXD	Explosion of explosive gases, subsequent encounter	ICD-10-CM	Diagnosis
W40.8XXA	Explosion of other specified explosive materials, initial encounter	ICD-10-CM	Diagnosis
W40.8XXD	Explosion of other specified explosive materials, subsequent encounter	ICD-10-CM	Diagnosis
W40.9XXA	Explosion of unspecified explosive materials, initial encounter	ICD-10-CM	Diagnosis
W40.9XXD	Explosion of unspecified explosive materials, subsequent encounter	ICD-10-CM	Diagnosis
X72.XXXA	Intentional self-harm by handgun discharge, initial encounter	ICD-10-CM	Diagnosis
X72.XXXD	Intentional self-harm by handgun discharge, subsequent encounter	ICD-10-CM	Diagnosis
X73.0XXA	Intentional self-harm by shotgun discharge, initial encounter	ICD-10-CM	Diagnosis
X73.0XXD	Intentional self-harm by shotgun discharge, subsequent encounter	ICD-10-CM	Diagnosis
X73.1XXA	Intentional self-harm by hunting rifle discharge, initial encounter	ICD-10-CM	Diagnosis
X73.1XXD	Intentional self-harm by hunting rifle discharge, subsequent encounter	ICD-10-CM	Diagnosis
X73.2XXA	Intentional self-harm by machine gun discharge, initial encounter	ICD-10-CM	Diagnosis
X73.2XXD	Intentional self-harm by machine gun discharge, subsequent encounter	ICD-10-CM	Diagnosis
X73.8XXA	Intentional self-harm by other larger firearm discharge, initial encounter	ICD-10-CM	Diagnosis
X73.8XXD	Intentional self-harm by other larger firearm discharge, subsequent encounter	ICD-10-CM	Diagnosis
X73.9XXA	Intentional self-harm by unspecified larger firearm discharge, initial encounter	ICD-10-CM	Diagnosis
X73.9XXD	Intentional self-harm by unspecified larger firearm discharge, subsequent encounter	ICD-10-CM	Diagnosis
X74.01XA	Intentional self-harm by airgun, initial encounter	ICD-10-CM	Diagnosis
X74.01XD	Intentional self-harm by airgun, subsequent encounter	ICD-10-CM	Diagnosis
X74.02XA	Intentional self-harm by paintball gun, initial encounter	ICD-10-CM	Diagnosis
X74.02XD	Intentional self-harm by paintball gun, subsequent encounter	ICD-10-CM	Diagnosis
X74.09XA	Intentional self-harm by other gas, air or spring-operated gun, initial encounter	ICD-10-CM	Diagnosis
X74.09XD	Intentional self-harm by other gas, air or spring-operated gun, subsequent encounter	ICD-10-CM	Diagnosis
X74.8XXA	Intentional self-harm by other firearm discharge, initial encounter	ICD-10-CM	Diagnosis
X74.8XXD	Intentional self-harm by other firearm discharge, subsequent encounter	ICD-10-CM	Diagnosis
X74.9XXA	Intentional self-harm by unspecified firearm discharge, initial encounter	ICD-10-CM	Diagnosis
X74.9XXD	Intentional self-harm by unspecified firearm discharge, subsequent encounter	ICD-10-CM	Diagnosis
X75.XXXA	Intentional self-harm by explosive material, initial encounter	ICD-10-CM	Diagnosis
X75.XXXD	Intentional self-harm by explosive material, subsequent encounter	ICD-10-CM	Diagnosis
X93.XXXA	Assault by handgun discharge, initial encounter	ICD-10-CM	Diagnosis
X93.XXXD	Assault by handgun discharge, subsequent encounter	ICD-10-CM	Diagnosis
X94.0XXA	Assault by shotgun, initial encounter	ICD-10-CM	Diagnosis
X94.0XXD	Assault by shotgun, subsequent encounter	ICD-10-CM	Diagnosis
X94.1XXA	Assault by hunting rifle, initial encounter	ICD-10-CM	Diagnosis
X94.1XXD	Assault by hunting rifle, subsequent encounter	ICD-10-CM	Diagnosis
X94.2XXA	Assault by machine gun, initial encounter	ICD-10-CM	Diagnosis
X94.2XXD	Assault by machine gun, subsequent encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
X94.8XXA	Assault by other larger firearm discharge, initial encounter	ICD-10-CM	Diagnosis
X94.8XXD	Assault by other larger firearm discharge, subsequent encounter	ICD-10-CM	Diagnosis
X94.9XXA	Assault by unspecified larger firearm discharge, initial encounter	ICD-10-CM	Diagnosis
X94.9XXD	Assault by unspecified larger firearm discharge, subsequent encounter	ICD-10-CM	Diagnosis
X95.02XA	Assault by paintball gun discharge, initial encounter	ICD-10-CM	Diagnosis
X95.02XD	Assault by paintball gun discharge, subsequent encounter	ICD-10-CM	Diagnosis
X95.09XA	Assault by other gas, air or spring-operated gun, initial encounter	ICD-10-CM	Diagnosis
X95.09XD	Assault by other gas, air or spring-operated gun, subsequent encounter	ICD-10-CM	Diagnosis
X95.8XXA	Assault by other firearm discharge, initial encounter	ICD-10-CM	Diagnosis
X95.8XXD	Assault by other firearm discharge, subsequent encounter	ICD-10-CM	Diagnosis
X95.9XXA	Assault by unspecified firearm discharge, initial encounter	ICD-10-CM	Diagnosis
X95.9XXD	Assault by unspecified firearm discharge, subsequent encounter	ICD-10-CM	Diagnosis
X96.0XXA	Assault by antipersonnel bomb, initial encounter	ICD-10-CM	Diagnosis
X96.0XXD	Assault by antipersonnel bomb, subsequent encounter	ICD-10-CM	Diagnosis
X96.1XXA	Assault by gasoline bomb, initial encounter	ICD-10-CM	Diagnosis
X96.1XXD	Assault by gasoline bomb, subsequent encounter	ICD-10-CM	Diagnosis
X96.2XXA	Assault by letter bomb, initial encounter	ICD-10-CM	Diagnosis
X96.2XXD	Assault by letter bomb, subsequent encounter	ICD-10-CM	Diagnosis
X96.3XXA	Assault by fertilizer bomb, initial encounter	ICD-10-CM	Diagnosis
X96.3XXD	Assault by fertilizer bomb, subsequent encounter	ICD-10-CM	Diagnosis
X96.4XXA	Assault by pipe bomb, initial encounter	ICD-10-CM	Diagnosis
X96.4XXD	Assault by pipe bomb, subsequent encounter	ICD-10-CM	Diagnosis
X96.8XXA	Assault by other specified explosive, initial encounter	ICD-10-CM	Diagnosis
X96.8XXD	Assault by other specified explosive, subsequent encounter	ICD-10-CM	Diagnosis
X96.9XXA	Assault by unspecified explosive, initial encounter	ICD-10-CM	Diagnosis
X96.9XXD	Assault by unspecified explosive, subsequent encounter	ICD-10-CM	Diagnosis
Y04.0XXA	Assault by unarmed brawl or fight, initial encounter	ICD-10-CM	Diagnosis
Y04.0XXD	Assault by unarmed brawl or fight, subsequent encounter	ICD-10-CM	Diagnosis
Y04.2XXA	Assault by strike against or bumped into by another person, initial encounter	ICD-10-CM	Diagnosis
Y04.2XXD	Assault by strike against or bumped into by another person, subsequent encounter	ICD-10-CM	Diagnosis
Y04.8XXA	Assault by other bodily force, initial encounter	ICD-10-CM	Diagnosis
Y04.8XXD	Assault by other bodily force, subsequent encounter	ICD-10-CM	Diagnosis
Y22.XXXA	Handgun discharge, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y22.XXXD	Handgun discharge, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis
Y23.0XXA	Shotgun discharge, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y23.0XXD	Shotgun discharge, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis
Y23.1XXA	Hunting rifle discharge, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y23.1XXD	Hunting rifle discharge, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis
Y23.2XXA	Military firearm discharge, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y23.2XXD	Military firearm discharge, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis
Y23.3XXA	Machine gun discharge, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y23.3XXD	Machine gun discharge, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis
Y23.8XXA	Other larger firearm discharge, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y23.8XXD	Other larger firearm discharge, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis
Y23.9XXA	Unspecified larger firearm discharge, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y23.9XXD	Unspecified larger firearm discharge, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis
Y24.0XXA	Airgun discharge, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y24.0XXD	Airgun discharge, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis
Y24.8XXA	Other firearm discharge, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y24.8XXD	Other firearm discharge, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
Y24.9XXA	Unspecified firearm discharge, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y24.9XXD	Unspecified firearm discharge, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis
Y25.XXXA	Contact with explosive material, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y25.XXXD	Contact with explosive material, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis
Y35.001A	Legal intervention involving unspecified firearm discharge, law enforcement official injured, initial encounter	ICD-10-CM	Diagnosis
Y35.001D	Legal intervention involving unspecified firearm discharge, law enforcement official injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.002A	Legal intervention involving unspecified firearm discharge, bystander injured, initial encounter	ICD-10-CM	Diagnosis
Y35.002D	Legal intervention involving unspecified firearm discharge, bystander injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.003A	Legal intervention involving unspecified firearm discharge, suspect injured, initial encounter	ICD-10-CM	Diagnosis
Y35.003D	Legal intervention involving unspecified firearm discharge, suspect injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.011A	Legal intervention involving injury by machine gun, law enforcement official injured, initial encounter	ICD-10-CM	Diagnosis
Y35.011D	Legal intervention involving injury by machine gun, law enforcement official injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.012A	Legal intervention involving injury by machine gun, bystander injured, initial encounter	ICD-10-CM	Diagnosis
Y35.012D	Legal intervention involving injury by machine gun, bystander injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.013A	Legal intervention involving injury by machine gun, suspect injured, initial encounter	ICD-10-CM	Diagnosis
Y35.013D	Legal intervention involving injury by machine gun, suspect injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.021A	Legal intervention involving injury by handgun, law enforcement official injured, initial encounter	ICD-10-CM	Diagnosis
Y35.021D	Legal intervention involving injury by handgun, law enforcement official injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.022A	Legal intervention involving injury by handgun, bystander injured, initial encounter	ICD-10-CM	Diagnosis
Y35.022D	Legal intervention involving injury by handgun, bystander injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.023A	Legal intervention involving injury by handgun, suspect injured, initial encounter	ICD-10-CM	Diagnosis
Y35.023D	Legal intervention involving injury by handgun, suspect injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.031A	Legal intervention involving injury by rifle pellet, law enforcement official injured, initial encounter	ICD-10-CM	Diagnosis
Y35.031D	Legal intervention involving injury by rifle pellet, law enforcement official injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.032A	Legal intervention involving injury by rifle pellet, bystander injured, initial encounter	ICD-10-CM	Diagnosis
Y35.032D	Legal intervention involving injury by rifle pellet, bystander injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.033A	Legal intervention involving injury by rifle pellet, suspect injured, initial encounter	ICD-10-CM	Diagnosis
Y35.033D	Legal intervention involving injury by rifle pellet, suspect injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.041A	Legal intervention involving injury by rubber bullet, law enforcement official injured, initial encounter	ICD-10-CM	Diagnosis
Y35.041D	Legal intervention involving injury by rubber bullet, law enforcement official injured, subsequent encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
Y35.042A	Legal intervention involving injury by rubber bullet, bystander injured, initial encounter	ICD-10-CM	Diagnosis
Y35.042D	Legal intervention involving injury by rubber bullet, bystander injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.043A	Legal intervention involving injury by rubber bullet, suspect injured, initial encounter	ICD-10-CM	Diagnosis
Y35.043D	Legal intervention involving injury by rubber bullet, suspect injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.091A	Legal intervention involving other firearm discharge, law enforcement official injured, initial encounter	ICD-10-CM	Diagnosis
Y35.091D	Legal intervention involving other firearm discharge, law enforcement official injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.092A	Legal intervention involving other firearm discharge, bystander injured, initial encounter	ICD-10-CM	Diagnosis
Y35.092D	Legal intervention involving other firearm discharge, bystander injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.093A	Legal intervention involving other firearm discharge, suspect injured, initial encounter	ICD-10-CM	Diagnosis
Y35.093D	Legal intervention involving other firearm discharge, suspect injured, subsequent encounter	ICD-10-CM	Diagnosis
W17.4XXA	Fall from dock, initial encounter	ICD-10-CM	Diagnosis
W17.4XXD	Fall from dock, subsequent encounter	ICD-10-CM	Diagnosis
W32.0XXA	Accidental handgun discharge, initial encounter	ICD-10-CM	Diagnosis
W32.0XXD	Accidental handgun discharge, subsequent encounter	ICD-10-CM	Diagnosis
W32.1XXA	Accidental handgun malfunction, initial encounter	ICD-10-CM	Diagnosis
W32.1XXD	Accidental handgun malfunction, subsequent encounter	ICD-10-CM	Diagnosis
W33.00XA	Accidental discharge of unspecified larger firearm, initial encounter	ICD-10-CM	Diagnosis
W33.00XD	Accidental discharge of unspecified larger firearm, subsequent encounter	ICD-10-CM	Diagnosis
W33.01XA	Accidental discharge of shotgun, initial encounter	ICD-10-CM	Diagnosis
W33.01XD	Accidental discharge of shotgun, subsequent encounter	ICD-10-CM	Diagnosis
W33.02XA	Accidental discharge of hunting rifle, initial encounter	ICD-10-CM	Diagnosis
W33.02XD	Accidental discharge of hunting rifle, subsequent encounter	ICD-10-CM	Diagnosis
W33.03XA	Accidental discharge of machine gun, initial encounter	ICD-10-CM	Diagnosis
W33.03XD	Accidental discharge of machine gun, subsequent encounter	ICD-10-CM	Diagnosis
W33.09XA	Accidental discharge of other larger firearm, initial encounter	ICD-10-CM	Diagnosis
W33.09XD	Accidental discharge of other larger firearm, subsequent encounter	ICD-10-CM	Diagnosis
W33.10XA	Accidental malfunction of unspecified larger firearm, initial encounter	ICD-10-CM	Diagnosis
W33.10XD	Accidental malfunction of unspecified larger firearm, subsequent encounter	ICD-10-CM	Diagnosis
W33.11XA	Accidental malfunction of shotgun, initial encounter	ICD-10-CM	Diagnosis
W33.11XD	Accidental malfunction of shotgun, subsequent encounter	ICD-10-CM	Diagnosis
W33.12XA	Accidental malfunction of hunting rifle, initial encounter	ICD-10-CM	Diagnosis
W33.12XD	Accidental malfunction of hunting rifle, subsequent encounter	ICD-10-CM	Diagnosis
W33.13XA	Accidental malfunction of machine gun, initial encounter	ICD-10-CM	Diagnosis
W33.13XD	Accidental malfunction of machine gun, subsequent encounter	ICD-10-CM	Diagnosis
W33.19XA	Accidental malfunction of other larger firearm, initial encounter	ICD-10-CM	Diagnosis
W33.19XD	Accidental malfunction of other larger firearm, subsequent encounter	ICD-10-CM	Diagnosis
W34.00XA	Accidental discharge from unspecified firearms or gun, initial encounter	ICD-10-CM	Diagnosis
W34.00XD	Accidental discharge from unspecified firearms or gun, subsequent encounter	ICD-10-CM	Diagnosis
W34.010A	Accidental discharge of airgun, initial encounter	ICD-10-CM	Diagnosis
W34.010D	Accidental discharge of airgun, subsequent encounter	ICD-10-CM	Diagnosis
W34.011A	Accidental discharge of paintball gun, initial encounter	ICD-10-CM	Diagnosis
W34.011D	Accidental discharge of paintball gun, subsequent encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
W34.018A	Accidental discharge of other gas, air or spring-operated gun, initial encounter	ICD-10-CM	Diagnosis
W34.018D	Accidental discharge of other gas, air or spring-operated gun, subsequent encounter	ICD-10-CM	Diagnosis
W34.09XA	Accidental discharge from other specified firearms, initial encounter	ICD-10-CM	Diagnosis
W34.09XD	Accidental discharge from other specified firearms, subsequent encounter	ICD-10-CM	Diagnosis
W34.10XA	Accidental malfunction from unspecified firearms or gun, initial encounter	ICD-10-CM	Diagnosis
W34.10XD	Accidental malfunction from unspecified firearms or gun, subsequent encounter	ICD-10-CM	Diagnosis
W34.110A	Accidental malfunction of airgun, initial encounter	ICD-10-CM	Diagnosis
W34.110D	Accidental malfunction of airgun, subsequent encounter	ICD-10-CM	Diagnosis
W34.111A	Accidental malfunction of paintball gun, initial encounter	ICD-10-CM	Diagnosis
W34.111D	Accidental malfunction of paintball gun, subsequent encounter	ICD-10-CM	Diagnosis
W34.118A	Accidental malfunction of other gas, air or spring-operated gun, initial encounter	ICD-10-CM	Diagnosis
W34.118D	Accidental malfunction of other gas, air or spring-operated gun, subsequent encounter	ICD-10-CM	Diagnosis
W34.19XA	Accidental malfunction from other specified firearms, initial encounter	ICD-10-CM	Diagnosis
W34.19XD	Accidental malfunction from other specified firearms, subsequent encounter	ICD-10-CM	Diagnosis
W39.XXXA	Discharge of firework, initial encounter	ICD-10-CM	Diagnosis
W39.XXXD	Discharge of firework, subsequent encounter	ICD-10-CM	Diagnosis
W40.0XXA	Explosion of blasting material, initial encounter	ICD-10-CM	Diagnosis
W40.0XXD	Explosion of blasting material, subsequent encounter	ICD-10-CM	Diagnosis
W40.1XXA	Explosion of explosive gases, initial encounter	ICD-10-CM	Diagnosis
W40.1XXD	Explosion of explosive gases, subsequent encounter	ICD-10-CM	Diagnosis
W40.8XXA	Explosion of other specified explosive materials, initial encounter	ICD-10-CM	Diagnosis
W40.8XXD	Explosion of other specified explosive materials, subsequent encounter	ICD-10-CM	Diagnosis
W40.9XXA	Explosion of unspecified explosive materials, initial encounter	ICD-10-CM	Diagnosis
W40.9XXD	Explosion of unspecified explosive materials, subsequent encounter	ICD-10-CM	Diagnosis
X72.XXXA	Intentional self-harm by handgun discharge, initial encounter	ICD-10-CM	Diagnosis
X72.XXXD	Intentional self-harm by handgun discharge, subsequent encounter	ICD-10-CM	Diagnosis
X73.0XXA	Intentional self-harm by shotgun discharge, initial encounter	ICD-10-CM	Diagnosis
X73.0XXD	Intentional self-harm by shotgun discharge, subsequent encounter	ICD-10-CM	Diagnosis
X73.1XXA	Intentional self-harm by hunting rifle discharge, initial encounter	ICD-10-CM	Diagnosis
X73.1XXD	Intentional self-harm by hunting rifle discharge, subsequent encounter	ICD-10-CM	Diagnosis
X73.2XXA	Intentional self-harm by machine gun discharge, initial encounter	ICD-10-CM	Diagnosis
X73.2XXD	Intentional self-harm by machine gun discharge, subsequent encounter	ICD-10-CM	Diagnosis
X73.8XXA	Intentional self-harm by other larger firearm discharge, initial encounter	ICD-10-CM	Diagnosis
X73.8XXD	Intentional self-harm by other larger firearm discharge, subsequent encounter	ICD-10-CM	Diagnosis
X73.9XXA	Intentional self-harm by unspecified larger firearm discharge, initial encounter	ICD-10-CM	Diagnosis
X73.9XXD	Intentional self-harm by unspecified larger firearm discharge, subsequent encounter	ICD-10-CM	Diagnosis
X74.01XA	Intentional self-harm by airgun, initial encounter	ICD-10-CM	Diagnosis
X74.01XD	Intentional self-harm by airgun, subsequent encounter	ICD-10-CM	Diagnosis
X74.02XA	Intentional self-harm by paintball gun, initial encounter	ICD-10-CM	Diagnosis
X74.02XD	Intentional self-harm by paintball gun, subsequent encounter	ICD-10-CM	Diagnosis
X74.09XA	Intentional self-harm by other gas, air or spring-operated gun, initial encounter	ICD-10-CM	Diagnosis
X74.09XD	Intentional self-harm by other gas, air or spring-operated gun, subsequent encounter	ICD-10-CM	Diagnosis
X74.8XXA	Intentional self-harm by other firearm discharge, initial encounter	ICD-10-CM	Diagnosis
X74.8XXD	Intentional self-harm by other firearm discharge, subsequent encounter	ICD-10-CM	Diagnosis
X74.9XXA	Intentional self-harm by unspecified firearm discharge, initial encounter	ICD-10-CM	Diagnosis
X74.9XXD	Intentional self-harm by unspecified firearm discharge, subsequent encounter	ICD-10-CM	Diagnosis
X75.XXXA	Intentional self-harm by explosive material, initial encounter	ICD-10-CM	Diagnosis
X75.XXXD	Intentional self-harm by explosive material, subsequent encounter	ICD-10-CM	Diagnosis
X93.XXXA	Assault by handgun discharge, initial encounter	ICD-10-CM	Diagnosis
X93.XXXD	Assault by handgun discharge, subsequent encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
X94.0XXA	Assault by shotgun, initial encounter	ICD-10-CM	Diagnosis
X94.0XXD	Assault by shotgun, subsequent encounter	ICD-10-CM	Diagnosis
X94.1XXA	Assault by hunting rifle, initial encounter	ICD-10-CM	Diagnosis
X94.1XXD	Assault by hunting rifle, subsequent encounter	ICD-10-CM	Diagnosis
X94.2XXA	Assault by machine gun, initial encounter	ICD-10-CM	Diagnosis
X94.2XXD	Assault by machine gun, subsequent encounter	ICD-10-CM	Diagnosis
X94.8XXA	Assault by other larger firearm discharge, initial encounter	ICD-10-CM	Diagnosis
X94.8XXD	Assault by other larger firearm discharge, subsequent encounter	ICD-10-CM	Diagnosis
X94.9XXA	Assault by unspecified larger firearm discharge, initial encounter	ICD-10-CM	Diagnosis
X94.9XXD	Assault by unspecified larger firearm discharge, subsequent encounter	ICD-10-CM	Diagnosis
X95.02XA	Assault by paintball gun discharge, initial encounter	ICD-10-CM	Diagnosis
X95.02XD	Assault by paintball gun discharge, subsequent encounter	ICD-10-CM	Diagnosis
X95.09XA	Assault by other gas, air or spring-operated gun, initial encounter	ICD-10-CM	Diagnosis
X95.09XD	Assault by other gas, air or spring-operated gun, subsequent encounter	ICD-10-CM	Diagnosis
X95.8XXA	Assault by other firearm discharge, initial encounter	ICD-10-CM	Diagnosis
X95.8XXD	Assault by other firearm discharge, subsequent encounter	ICD-10-CM	Diagnosis
X95.9XXA	Assault by unspecified firearm discharge, initial encounter	ICD-10-CM	Diagnosis
X95.9XXD	Assault by unspecified firearm discharge, subsequent encounter	ICD-10-CM	Diagnosis
X96.0XXA	Assault by antipersonnel bomb, initial encounter	ICD-10-CM	Diagnosis
X96.0XXD	Assault by antipersonnel bomb, subsequent encounter	ICD-10-CM	Diagnosis
X96.1XXA	Assault by gasoline bomb, initial encounter	ICD-10-CM	Diagnosis
X96.1XXD	Assault by gasoline bomb, subsequent encounter	ICD-10-CM	Diagnosis
X96.2XXA	Assault by letter bomb, initial encounter	ICD-10-CM	Diagnosis
X96.2XXD	Assault by letter bomb, subsequent encounter	ICD-10-CM	Diagnosis
X96.3XXA	Assault by fertilizer bomb, initial encounter	ICD-10-CM	Diagnosis
X96.3XXD	Assault by fertilizer bomb, subsequent encounter	ICD-10-CM	Diagnosis
X96.4XXA	Assault by pipe bomb, initial encounter	ICD-10-CM	Diagnosis
X96.4XXD	Assault by pipe bomb, subsequent encounter	ICD-10-CM	Diagnosis
X96.8XXA	Assault by other specified explosive, initial encounter	ICD-10-CM	Diagnosis
X96.8XXD	Assault by other specified explosive, subsequent encounter	ICD-10-CM	Diagnosis
X96.9XXA	Assault by unspecified explosive, initial encounter	ICD-10-CM	Diagnosis
X96.9XXD	Assault by unspecified explosive, subsequent encounter	ICD-10-CM	Diagnosis
Y04.0XXA	Assault by unarmed brawl or fight, initial encounter	ICD-10-CM	Diagnosis
Y04.0XXD	Assault by unarmed brawl or fight, subsequent encounter	ICD-10-CM	Diagnosis
Y04.2XXA	Assault by strike against or bumped into by another person, initial encounter	ICD-10-CM	Diagnosis
Y04.2XXD	Assault by strike against or bumped into by another person, subsequent encounter	ICD-10-CM	Diagnosis
Y04.8XXA	Assault by other bodily force, initial encounter	ICD-10-CM	Diagnosis
Y04.8XXD	Assault by other bodily force, subsequent encounter	ICD-10-CM	Diagnosis
Y22.XXXA	Handgun discharge, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y22.XXXD	Handgun discharge, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis
Y23.0XXA	Shotgun discharge, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y23.0XXD	Shotgun discharge, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis
Y23.1XXA	Hunting rifle discharge, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y23.1XXD	Hunting rifle discharge, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis
Y23.2XXA	Military firearm discharge, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y23.2XXD	Military firearm discharge, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis
Y23.3XXA	Machine gun discharge, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y23.3XXD	Machine gun discharge, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis
Y23.8XXA	Other larger firearm discharge, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y23.8XXD	Other larger firearm discharge, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
Y23.9XXA	Unspecified larger firearm discharge, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y23.9XXD	Unspecified larger firearm discharge, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis
Y24.0XXA	Airgun discharge, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y24.0XXD	Airgun discharge, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis
Y24.8XXA	Other firearm discharge, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y24.8XXD	Other firearm discharge, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis
Y24.9XXA	Unspecified firearm discharge, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y24.9XXD	Unspecified firearm discharge, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis
Y25.XXXA	Contact with explosive material, undetermined intent, initial encounter	ICD-10-CM	Diagnosis
Y25.XXXD	Contact with explosive material, undetermined intent, subsequent encounter	ICD-10-CM	Diagnosis
Y35.001A	Legal intervention involving unspecified firearm discharge, law enforcement official injured, initial encounter	ICD-10-CM	Diagnosis
Y35.001D	Legal intervention involving unspecified firearm discharge, law enforcement official injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.002A	Legal intervention involving unspecified firearm discharge, bystander injured, initial encounter	ICD-10-CM	Diagnosis
Y35.002D	Legal intervention involving unspecified firearm discharge, bystander injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.003A	Legal intervention involving unspecified firearm discharge, suspect injured, initial encounter	ICD-10-CM	Diagnosis
Y35.003D	Legal intervention involving unspecified firearm discharge, suspect injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.011A	Legal intervention involving injury by machine gun, law enforcement official injured, initial encounter	ICD-10-CM	Diagnosis
Y35.011D	Legal intervention involving injury by machine gun, law enforcement official injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.012A	Legal intervention involving injury by machine gun, bystander injured, initial encounter	ICD-10-CM	Diagnosis
Y35.012D	Legal intervention involving injury by machine gun, bystander injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.013A	Legal intervention involving injury by machine gun, suspect injured, initial encounter	ICD-10-CM	Diagnosis
Y35.013D	Legal intervention involving injury by machine gun, suspect injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.021A	Legal intervention involving injury by handgun, law enforcement official injured, initial encounter	ICD-10-CM	Diagnosis
Y35.021D	Legal intervention involving injury by handgun, law enforcement official injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.022A	Legal intervention involving injury by handgun, bystander injured, initial encounter	ICD-10-CM	Diagnosis
Y35.022D	Legal intervention involving injury by handgun, bystander injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.023A	Legal intervention involving injury by handgun, suspect injured, initial encounter	ICD-10-CM	Diagnosis
Y35.023D	Legal intervention involving injury by handgun, suspect injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.031A	Legal intervention involving injury by rifle pellet, law enforcement official injured, initial encounter	ICD-10-CM	Diagnosis
Y35.031D	Legal intervention involving injury by rifle pellet, law enforcement official injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.032A	Legal intervention involving injury by rifle pellet, bystander injured, initial encounter	ICD-10-CM	Diagnosis
Y35.032D	Legal intervention involving injury by rifle pellet, bystander injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.033A	Legal intervention involving injury by rifle pellet, suspect injured, initial encounter	ICD-10-CM	Diagnosis

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Outcomes and Censoring Criteria in this Request

Code	Description	Code Type	Code Category
Y35.033D	Legal intervention involving injury by rifle pellet, suspect injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.041A	Legal intervention involving injury by rubber bullet, law enforcement official injured, initial encounter	ICD-10-CM	Diagnosis
Y35.041D	Legal intervention involving injury by rubber bullet, law enforcement official injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.042A	Legal intervention involving injury by rubber bullet, bystander injured, initial encounter	ICD-10-CM	Diagnosis
Y35.042D	Legal intervention involving injury by rubber bullet, bystander injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.043A	Legal intervention involving injury by rubber bullet, suspect injured, initial encounter	ICD-10-CM	Diagnosis
Y35.043D	Legal intervention involving injury by rubber bullet, suspect injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.091A	Legal intervention involving other firearm discharge, law enforcement official injured, initial encounter	ICD-10-CM	Diagnosis
Y35.091D	Legal intervention involving other firearm discharge, law enforcement official injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.092A	Legal intervention involving other firearm discharge, bystander injured, initial encounter	ICD-10-CM	Diagnosis
Y35.092D	Legal intervention involving other firearm discharge, bystander injured, subsequent encounter	ICD-10-CM	Diagnosis
Y35.093A	Legal intervention involving other firearm discharge, suspect injured, initial encounter	ICD-10-CM	Diagnosis
Y35.093D	Legal intervention involving other firearm discharge, suspect injured, subsequent encounter	ICD-10-CM	Diagnosis

Appendix D. List of Generic and Brand Names of Medical Products Used to Define Exposure Incidence and Censoring Criteria in this Request

Generic Name	Brand Name
apixaban	Eliquis
dabigatran etexilate mesylate	Pradaxa
rivaroxaban	Xarelto
edoxaban tosylate	Savaysa
warfarin sodium	Coumadin
warfarin sodium	Jantoven
warfarin sodium	Warfarin

Appendix E. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Diagnosis and Procedure Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
Atrial Fibrillation			
427.31	Atrial fibrillation	ICD-9-CM	Diagnosis
427.32	Atrial flutter	ICD-9-CM	Diagnosis
427.3	Atrial fibrillation and flutter	ICD-9-CM	Diagnosis
I48.0	Paroxysmal atrial fibrillation	ICD-10-CM	Diagnosis
I48.1	Persistent atrial fibrillation	ICD-10-CM	Diagnosis
I48.2	Chronic atrial fibrillation	ICD-10-CM	Diagnosis
I48.3	Typical atrial flutter	ICD-10-CM	Diagnosis
I48.4	Atypical atrial flutter	ICD-10-CM	Diagnosis
I48.91	Unspecified atrial fibrillation	ICD-10-CM	Diagnosis
I48.92	Unspecified atrial flutter	ICD-10-CM	Diagnosis
Deep Vein Thrombosis			
453.4	Acute venous embolism and thrombosis of deep vessels of lower extremity	ICD-9-CM	Diagnosis
453.4	Acute venous embolism and thrombosis of unspecified deep vessels of lower extremity	ICD-9-CM	Diagnosis
453.41	Acute venous embolism and thrombosis of deep vessels of proximal lower extremity	ICD-9-CM	Diagnosis
453.42	Acute venous embolism and thrombosis of deep vessels of distal lower extremity	ICD-9-CM	Diagnosis
451.1	Phlebitis and thrombophlebitis of deep veins of lower extremities	ICD-9-CM	Diagnosis
451.11	Phlebitis and thrombophlebitis of femoral vein (deep) (superficial)	ICD-9-CM	Diagnosis
451.19	Phlebitis and thrombophlebitis of deep veins of lower extremities, other	ICD-9-CM	Diagnosis
451.2	Phlebitis and thrombophlebitis of lower extremities, unspecified	ICD-9-CM	Diagnosis
451.81	Phlebitis and thrombophlebitis of iliac vein	ICD-9-CM	Diagnosis
451.83	Phlebitis and thrombophlebitis of deep veins of upper extremities	ICD-9-CM	Diagnosis
453.84	Phlebitis and thrombophlebitis of upper extremities, unspecified	ICD-9-CM	Diagnosis
I80.10	Phlebitis and thrombophlebitis of unspecified femoral vein	ICD-10-CM	Diagnosis
I80.11	Phlebitis and thrombophlebitis of right femoral vein	ICD-10-CM	Diagnosis
I80.12	Phlebitis and thrombophlebitis of left femoral vein	ICD-10-CM	Diagnosis
I80.13	Phlebitis and thrombophlebitis of femoral vein, bilateral	ICD-10-CM	Diagnosis
I80.201	Phlebitis and thrombophlebitis of unspecified deep vessels of right lower extremity	ICD-10-CM	Diagnosis
I80.202	Phlebitis and thrombophlebitis of unspecified deep vessels of left lower extremity	ICD-10-CM	Diagnosis
I80.203	Phlebitis and thrombophlebitis of unspecified deep vessels of lower extremities, bilateral	ICD-10-CM	Diagnosis
I80.209	Phlebitis and thrombophlebitis of unspecified deep vessels of unspecified lower extremity	ICD-10-CM	Diagnosis
I80.211	Phlebitis and thrombophlebitis of right iliac vein	ICD-10-CM	Diagnosis
I80.212	Phlebitis and thrombophlebitis of left iliac vein	ICD-10-CM	Diagnosis
I80.213	Phlebitis and thrombophlebitis of iliac vein, bilateral	ICD-10-CM	Diagnosis
I80.219	Phlebitis and thrombophlebitis of unspecified iliac vein	ICD-10-CM	Diagnosis
I80.221	Phlebitis and thrombophlebitis of right popliteal vein	ICD-10-CM	Diagnosis
I80.222	Phlebitis and thrombophlebitis of left popliteal vein	ICD-10-CM	Diagnosis
I80.223	Phlebitis and thrombophlebitis of popliteal vein, bilateral	ICD-10-CM	Diagnosis
I80.229	Phlebitis and thrombophlebitis of unspecified popliteal vein	ICD-10-CM	Diagnosis
I80.231	Phlebitis and thrombophlebitis of right tibial vein	ICD-10-CM	Diagnosis
I80.232	Phlebitis and thrombophlebitis of left tibial vein	ICD-10-CM	Diagnosis
I80.233	Phlebitis and thrombophlebitis of tibial vein, bilateral	ICD-10-CM	Diagnosis
I80.239	Phlebitis and thrombophlebitis of unspecified tibial vein	ICD-10-CM	Diagnosis
I80.291	Phlebitis and thrombophlebitis of other deep vessels of right lower extremity	ICD-10-CM	Diagnosis
I80.292	Phlebitis and thrombophlebitis of other deep vessels of left lower extremity	ICD-10-CM	Diagnosis
I80.293	Phlebitis and thrombophlebitis of other deep vessels of lower extremity, bilateral	ICD-10-CM	Diagnosis

Appendix E. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Diagnosis and Procedure Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
I80.299	Phlebitis and thrombophlebitis of other deep vessels of unspecified lower extremity	ICD-10-CM	Diagnosis
I80.3	Phlebitis and thrombophlebitis of lower extremities, unspecified	ICD-10-CM	Diagnosis
I80.8	Phlebitis and thrombophlebitis of other sites	ICD-10-CM	Diagnosis
I82.401	Acute embolism and thrombosis of unspecified deep veins of right lower extremity	ICD-10-CM	Diagnosis
I82.402	Acute embolism and thrombosis of unspecified deep veins of left lower extremity	ICD-10-CM	Diagnosis
I82.403	Acute embolism and thrombosis of unspecified deep veins of lower extremity, bilateral	ICD-10-CM	Diagnosis
I82.409	Acute embolism and thrombosis of unspecified deep veins of unspecified lower extremity	ICD-10-CM	Diagnosis
I82.411	Acute embolism and thrombosis of right femoral vein	ICD-10-CM	Diagnosis
I82.412	Acute embolism and thrombosis of left femoral vein	ICD-10-CM	Diagnosis
I82.413	Acute embolism and thrombosis of femoral vein, bilateral	ICD-10-CM	Diagnosis
I82.419	Acute embolism and thrombosis of unspecified femoral vein	ICD-10-CM	Diagnosis
I82.421	Acute embolism and thrombosis of right iliac vein	ICD-10-CM	Diagnosis
I82.422	Acute embolism and thrombosis of left iliac vein	ICD-10-CM	Diagnosis
I82.423	Acute embolism and thrombosis of iliac vein, bilateral	ICD-10-CM	Diagnosis
I82.429	Acute embolism and thrombosis of unspecified iliac vein	ICD-10-CM	Diagnosis
I82.431	Acute embolism and thrombosis of right popliteal vein	ICD-10-CM	Diagnosis
I82.432	Acute embolism and thrombosis of left popliteal vein	ICD-10-CM	Diagnosis
I82.433	Acute embolism and thrombosis of popliteal vein, bilateral	ICD-10-CM	Diagnosis
I82.439	Acute embolism and thrombosis of unspecified popliteal vein	ICD-10-CM	Diagnosis
I82.441	Acute embolism and thrombosis of right tibial vein	ICD-10-CM	Diagnosis
I82.442	Acute embolism and thrombosis of left tibial vein	ICD-10-CM	Diagnosis
I82.443	Acute embolism and thrombosis of tibial vein, bilateral	ICD-10-CM	Diagnosis
I82.449	Acute embolism and thrombosis of unspecified tibial vein	ICD-10-CM	Diagnosis
I82.491	Acute embolism and thrombosis of other specified deep vein of right lower extremity	ICD-10-CM	Diagnosis
I82.492	Acute embolism and thrombosis of other specified deep vein of left lower extremity	ICD-10-CM	Diagnosis
I82.493	Acute embolism and thrombosis of other specified deep vein of lower extremity, bilateral	ICD-10-CM	Diagnosis
I82.499	Acute embolism and thrombosis of other specified deep vein of unspecified lower extremity	ICD-10-CM	Diagnosis
I82.4Y1	Acute embolism and thrombosis of unspecified deep veins of right proximal lower extremity	ICD-10-CM	Diagnosis
I82.4Y2	Acute embolism and thrombosis of unspecified deep veins of left proximal lower extremity	ICD-10-CM	Diagnosis
I82.4Y3	Acute embolism and thrombosis of unspecified deep veins of proximal lower extremity, bilateral	ICD-10-CM	Diagnosis
I82.4Y9	Acute embolism and thrombosis of unspecified deep veins of unspecified proximal lower extremity	ICD-10-CM	Diagnosis
I82.4Z1	Acute embolism and thrombosis of unspecified deep veins of right distal lower extremity	ICD-10-CM	Diagnosis
I82.4Z2	Acute embolism and thrombosis of unspecified deep veins of left distal lower extremity	ICD-10-CM	Diagnosis
I82.4Z3	Acute embolism and thrombosis of unspecified deep veins of distal lower extremity, bilateral	ICD-10-CM	Diagnosis
I82.4Z9	Acute embolism and thrombosis of unspecified deep veins of unspecified distal lower extremity	ICD-10-CM	Diagnosis
I82.A11	Acute embolism and thrombosis of right axillary vein	ICD-10-CM	Diagnosis
I82.A12	Acute embolism and thrombosis of left axillary vein	ICD-10-CM	Diagnosis
I82.A13	Acute embolism and thrombosis of axillary vein, bilateral	ICD-10-CM	Diagnosis
I82.A19	Acute embolism and thrombosis of unspecified axillary vein	ICD-10-CM	Diagnosis
Dialysis			
792.5	Cloudy (hemodialysis) (peritoneal) dialysis effluent	ICD-9-CM	Diagnosis
V45.1	Renal dialysis status	ICD-9-CM	Diagnosis

Appendix E. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Diagnosis and Procedure Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
V45.11	Renal dialysis status	ICD-9-CM	Diagnosis
V45.12	Noncompliance with renal dialysis	ICD-9-CM	Diagnosis
V56.0	Encounter for extracorporeal dialysis	ICD-9-CM	Diagnosis
V56.1	Fitting and adjustment of extracorporeal dialysis catheter	ICD-9-CM	Diagnosis
V56.2	Fitting and adjustment of peritoneal dialysis catheter	ICD-9-CM	Diagnosis
V56.3	Encounter for adequacy testing for dialysis	ICD-9-CM	Diagnosis
V56.31	Encounter for adequacy testing for hemodialysis	ICD-9-CM	Diagnosis
V56.32	Encounter for adequacy testing for peritoneal dialysis	ICD-9-CM	Diagnosis
V56.8	Encounter other dialysis	ICD-9-CM	Diagnosis
R88.0	Cloudy (hemodialysis) (peritoneal) dialysis effluent	ICD-10-CM	Diagnosis
Z49.01	Encounter for fitting and adjustment of extracorporeal dialysis catheter	ICD-10-CM	Diagnosis
Z49.02	Encounter for fitting and adjustment of peritoneal dialysis catheter	ICD-10-CM	Diagnosis
Z49.31	Encounter for adequacy testing for hemodialysis	ICD-10-CM	Diagnosis
Z49.32	Encounter for adequacy testing for peritoneal dialysis	ICD-10-CM	Diagnosis
Z91.15	Patient's noncompliance with renal dialysis	ICD-10-CM	Diagnosis
Z99.2	Dependence on renal dialysis	ICD-10-CM	Diagnosis
90935	Hemodialysis procedure with single evaluation by a physician or other qualified health care professional	CPT-4	Procedure
90937	Hemodialysis procedure requiring repeated evaluation(s) with or without substantial revision of dialysis prescription	CPT-4	Procedure
90939	Hemodialysis access flow study to determine blood flow in grafts and arteriovenous fistulae by an indicator dilution method, hook-up; transcutaneous measurement and disconnection	CPT-4	Procedure
90940	Hemodialysis access flow study to determine blood flow in grafts and arteriovenous fistulae by an indicator method	CPT-4	Procedure
90941	Hemodialysis, For Acute Renal Failure And Or Intoxication,	CPT-4	Procedure
90942	Hemodialysis, For Acute Renal Failure And Or Intoxication,	CPT-4	Procedure
90943	Hemodialysis, For Acute Renal Failure And Or Intoxication,	CPT-4	Procedure
90944	Hemodialysis, For Acute Renal Failure And Or Intoxication,	CPT-4	Procedure
90945	Dialysis procedure other than hemodialysis (eg, peritoneal dialysis, hemofiltration, or other continuous renal replacement therapies), with single evaluation by a physician or other qualified health care professional	CPT-4	Procedure
90947	Dialysis procedure other than hemodialysis (eg, peritoneal dialysis, hemofiltration, or other continuous renal replacement therapies) requiring repeated evaluations by a physician or other qualified health care professional, with or without substantial revision of dialysis prescription	CPT-4	Procedure
90951	End-stage renal disease (ESRD) related services monthly, for patients younger than 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 4 or more face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure
90952	End-stage renal disease (ESRD) related services monthly, for patients younger than 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 2-3 face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure

Appendix E. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Diagnosis and Procedure Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
90953	End-stage renal disease (ESRD) related services monthly, for patients younger than 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 1 face-to-face visit by a physician or other qualified health care professional per month	CPT-4	Procedure
90954	End-stage renal disease (ESRD) related services monthly, for patients 2-11 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 4 or more face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure
90955	End-stage renal disease (ESRD) related services monthly, for patients 2-11 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 2-3 face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure
90956	End-stage renal disease (ESRD) related services monthly, for patients 2-11 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 1 face-to-face visit by a physician or other qualified health care professional per month	CPT-4	Procedure
90957	End-stage renal disease (ESRD) related services monthly, for patients 12-19 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 4 or more face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure
90958	End-stage renal disease (ESRD) related services monthly, for patients 12-19 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 2-3 face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure
90959	End-stage renal disease (ESRD) related services monthly, for patients 12-19 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 1 face-to-face visit by a physician or other qualified health care professional per month	CPT-4	Procedure
90960	End-stage renal disease (ESRD) related services monthly, for patients 20 years of age and older; with 4 or more face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure
90961	End-stage renal disease (ESRD) related services monthly, for patients 20 years of age and older; with 2-3 face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure
90962	End-stage renal disease (ESRD) related services monthly, for patients 20 years of age and older; with 1 face-to-face visit by a physician or other qualified health care professional per month	CPT-4	Procedure

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Code	Description	Code Type	Code Category
90963	End-stage renal disease (ESRD) related services for home dialysis per full month, for patients younger than 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents	CPT-4	Procedure
90964	End-stage renal disease (ESRD) related services for home dialysis per full month, for patients 2-11 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents	CPT-4	Procedure
90965	End-stage renal disease (ESRD) related services for home dialysis per full month, for patients 12-19 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents	CPT-4	Procedure
90966	End-stage renal disease (ESRD) related services for home dialysis per full month, for patients 20 years of age and older	CPT-4	Procedure
90967	End-stage renal disease (ESRD) related services for dialysis less than a full month of service, per day; for patients younger than 2 years of age	CPT-4	Procedure
90968	End-stage renal disease (ESRD) related services for dialysis less than a full month of service, per day; for patients 2-11 years of age	CPT-4	Procedure
90969	End-stage renal disease (ESRD) related services for dialysis less than a full month of service, per day; for patients 12-19 years of age	CPT-4	Procedure
90970	End-stage renal disease (ESRD) related services for dialysis less than a full month of service, per day; for patients 20 years of age and older	CPT-4	Procedure
90976	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90977	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90978	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90979	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90982	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90983	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90984	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90985	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90988	Supervision Of Hemodialysis In Hospital Or Other Facility (excluding Home Dialysis), On Monthly Basis	CPT-4	Procedure
90989	Dialysis training, patient, including helper where applicable, any mode, completed course	CPT-4	Procedure
90990	Hemodialysis Training And/or Counseling	CPT-4	Procedure
90991	Home Hemodialysis Care, Outpatient, For Those Services Either Provided By The Physician Primarily Responsible	CPT-4	Procedure
90992	Peritoneal Dialysis Training And/or Counseling	CPT-4	Procedure
90993	Dialysis training, patient, including helper where applicable, any mode, course not completed, per training session	CPT-4	Procedure
90994	Supervision Of Chronic Ambulatory Peritoneal Dialysis (capd), Home Or Out-patient (monthly)	CPT-4	Procedure
90995	End Stage Renal Disease (esrd) Related Services, Per Full Month	CPT-4	Procedure
90996	Continuous Arteriovenous Hemofiltration (cavh) (per Day)	CPT-4	Procedure
90997	Hemoperfusion (eg, with activated charcoal or resin)	CPT-4	Procedure
90998	End Stage Renal Disease (esrd) Related Services (less Than Full Month), Per Day	CPT-4	Procedure
90999	Unlisted dialysis procedure, inpatient or outpatient	CPT-4	Procedure

Joint Replacement

Appendix E. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Diagnosis and Procedure Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
V43.6	Joint replaced by other means	ICD-9-CM	Diagnosis
V43.60	Unspecified joint replacement	ICD-9-CM	Diagnosis
V43.61	Shoulder joint replacement	ICD-9-CM	Diagnosis
V43.62	Elbow joint replacement	ICD-9-CM	Diagnosis
V43.63	Wrist joint replacement	ICD-9-CM	Diagnosis
V43.64	Hip joint replacement	ICD-9-CM	Diagnosis
V43.65	Knee joint replacement	ICD-9-CM	Diagnosis
V43.66	Ankle joint replacement	ICD-9-CM	Diagnosis
V43.69	Other joint replacement	ICD-9-CM	Diagnosis
81.5	JOINT REPLACEMENT LOWER EXTREMITY	ICD-9-CM	Procedure
81.51	TOTAL HIP REPLACEMENT	ICD-9-CM	Procedure
81.52	PARTIAL HIP REPLACEMENT	ICD-9-CM	Procedure
81.53	REVISION OF HIP REPLACEMENT NOS	ICD-9-CM	Procedure
81.54	TOTAL KNEE REPLACEMENT	ICD-9-CM	Procedure
81.55	REVISION OF KNEE REPLACEMENT NOS	ICD-9-CM	Procedure
81.56	TOTAL ANKLE REPLACEMENT	ICD-9-CM	Procedure
81.57	REPLACEMENT OF JOINT OF FOOT&TOE	ICD-9-CM	Procedure
81.59	REV JOINT REPLCMT LOWER EXTREM NEC	ICD-9-CM	Procedure
81.8	ARTHROPLASTY&REPAIR SHOULDER&ELBOW	ICD-9-CM	Procedure
81.8	OTHER TOTAL SHOULDER REPLACEMENT	ICD-9-CM	Procedure
81.81	PARTIAL SHOULDER REPLACEMENT	ICD-9-CM	Procedure
81.82	REPAIR RECURRENT DISLOC SHOULDER	ICD-9-CM	Procedure
81.83	OTHER REPAIR OF SHOULDER	ICD-9-CM	Procedure
81.84	TOTAL ELBOW REPLACEMENT	ICD-9-CM	Procedure
81.85	OTHER REPAIR OF ELBOW	ICD-9-CM	Procedure
24363	REPLACE ELBOW JOINT	CPT-4	Procedure
27130	TOTAL HIP ARTHROPLASTY	CPT-4	Procedure
27132	TOTAL HIP ARTHROPLASTY	CPT-4	Procedure
27134	REVISE HIP JOINT REPLACEMENT	CPT-4	Procedure
27137	REVISE HIP JOINT REPLACEMENT	CPT-4	Procedure
27138	REVISE HIP JOINT REPLACEMENT	CPT-4	Procedure
27447	TOTAL KNEE ARTHROPLASTY	CPT-4	Procedure
Z96.60	Presence of unspecified orthopedic joint implant	ICD-10-CM	Diagnosis
Z96.611	Presence of right artificial shoulder joint	ICD-10-CM	Diagnosis
Z96.612	Presence of left artificial shoulder joint	ICD-10-CM	Diagnosis
Z96.619	Presence of unspecified artificial shoulder joint	ICD-10-CM	Diagnosis
Z96.621	Presence of right artificial elbow joint	ICD-10-CM	Diagnosis
Z96.622	Presence of left artificial elbow joint	ICD-10-CM	Diagnosis
Z96.629	Presence of unspecified artificial elbow joint	ICD-10-CM	Diagnosis
Z96.631	Presence of right artificial wrist joint	ICD-10-CM	Diagnosis
Z96.632	Presence of left artificial wrist joint	ICD-10-CM	Diagnosis
Z96.639	Presence of unspecified artificial wrist joint	ICD-10-CM	Diagnosis
Z96.641	Presence of right artificial hip joint	ICD-10-CM	Diagnosis
Z96.642	Presence of left artificial hip joint	ICD-10-CM	Diagnosis
Z96.643	Presence of artificial hip joint, bilateral	ICD-10-CM	Diagnosis
Z96.649	Presence of unspecified artificial hip joint	ICD-10-CM	Diagnosis
Z96.651	Presence of right artificial knee joint	ICD-10-CM	Diagnosis
Z96.652	Presence of left artificial knee joint	ICD-10-CM	Diagnosis
Z96.653	Presence of artificial knee joint, bilateral	ICD-10-CM	Diagnosis
Z96.659	Presence of unspecified artificial knee joint	ICD-10-CM	Diagnosis

Appendix E. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Diagnosis and Procedure Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
Z96.661	Presence of right artificial ankle joint	ICD-10-CM	Diagnosis
Z96.662	Presence of left artificial ankle joint	ICD-10-CM	Diagnosis
Z96.669	Presence of unspecified artificial ankle joint	ICD-10-CM	Diagnosis
Z96.691	Finger-joint replacement of right hand	ICD-10-CM	Diagnosis
Z96.692	Finger-joint replacement of left hand	ICD-10-CM	Diagnosis
Z96.693	Finger-joint replacement, bilateral	ICD-10-CM	Diagnosis
Z96.698	Presence of other orthopedic joint implants	ICD-10-CM	Diagnosis
Z96.7	Presence of other bone and tendon implants	ICD-10-CM	Diagnosis
ORQE0ZZ	Repair Right Sternoclavicular Joint, Open Approach	ICD-10-PCS	Procedure
ORQE3ZZ	Repair Right Sternoclavicular Joint, Percutaneous Approach	ICD-10-PCS	Procedure
ORQE4ZZ	Repair Right Sternoclavicular Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORQEXZZ	Repair Right Sternoclavicular Joint, External Approach	ICD-10-PCS	Procedure
ORQF0ZZ	Repair Left Sternoclavicular Joint, Open Approach	ICD-10-PCS	Procedure
ORQF3ZZ	Repair Left Sternoclavicular Joint, Percutaneous Approach	ICD-10-PCS	Procedure
ORQF4ZZ	Repair Left Sternoclavicular Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORQFXZZ	Repair Left Sternoclavicular Joint, External Approach	ICD-10-PCS	Procedure
ORQG0ZZ	Repair Right Acromioclavicular Joint, Open Approach	ICD-10-PCS	Procedure
ORQG3ZZ	Repair Right Acromioclavicular Joint, Percutaneous Approach	ICD-10-PCS	Procedure
ORQG4ZZ	Repair Right Acromioclavicular Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORQGXZZ	Repair Right Acromioclavicular Joint, External Approach	ICD-10-PCS	Procedure
ORQH0ZZ	Repair Left Acromioclavicular Joint, Open Approach	ICD-10-PCS	Procedure
ORQH3ZZ	Repair Left Acromioclavicular Joint, Percutaneous Approach	ICD-10-PCS	Procedure
ORQH4ZZ	Repair Left Acromioclavicular Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORQHXZZ	Repair Left Acromioclavicular Joint, External Approach	ICD-10-PCS	Procedure
ORQJ0ZZ	Repair Right Shoulder Joint, Open Approach	ICD-10-PCS	Procedure
ORQJ3ZZ	Repair Right Shoulder Joint, Percutaneous Approach	ICD-10-PCS	Procedure
ORQJ4ZZ	Repair Right Shoulder Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORQJXZZ	Repair Right Shoulder Joint, External Approach	ICD-10-PCS	Procedure
ORQK0ZZ	Repair Left Shoulder Joint, Open Approach	ICD-10-PCS	Procedure
ORQK3ZZ	Repair Left Shoulder Joint, Percutaneous Approach	ICD-10-PCS	Procedure
ORQK4ZZ	Repair Left Shoulder Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORQKXZZ	Repair Left Shoulder Joint, External Approach	ICD-10-PCS	Procedure
ORQL0ZZ	Repair Right Elbow Joint, Open Approach	ICD-10-PCS	Procedure
ORQL3ZZ	Repair Right Elbow Joint, Percutaneous Approach	ICD-10-PCS	Procedure
ORQL4ZZ	Repair Right Elbow Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORQLXZZ	Repair Right Elbow Joint, External Approach	ICD-10-PCS	Procedure
ORQM0ZZ	Repair Left Elbow Joint, Open Approach	ICD-10-PCS	Procedure
ORQM3ZZ	Repair Left Elbow Joint, Percutaneous Approach	ICD-10-PCS	Procedure
ORQM4ZZ	Repair Left Elbow Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORQMXZZ	Repair Left Elbow Joint, External Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Diagnosis and Procedure Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
ORRE07Z	Replacement of Right Sternoclavicular Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORRE0JZ	Replacement of Right Sternoclavicular Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
ORRE0KZ	Replacement of Right Sternoclavicular Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORRF07Z	Replacement of Left Sternoclavicular Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORRF0JZ	Replacement of Left Sternoclavicular Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
ORRF0KZ	Replacement of Left Sternoclavicular Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORRG07Z	Replacement of Right Acromioclavicular Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORRG0JZ	Replacement of Right Acromioclavicular Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
ORRG0KZ	Replacement of Right Acromioclavicular Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORRH07Z	Replacement of Left Acromioclavicular Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORRH0JZ	Replacement of Left Acromioclavicular Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
ORRH0KZ	Replacement of Left Acromioclavicular Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORRJ07Z	Replacement of Right Shoulder Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORRJ0J6	Replacement of Right Shoulder Joint with Synthetic Substitute, Humeral Surface, Open Approach	ICD-10-PCS	Procedure
ORRJ0J7	Replacement of Right Shoulder Joint with Synthetic Substitute, Glenoid Surface, Open Approach	ICD-10-PCS	Procedure
ORRJ0JZ	Replacement of Right Shoulder Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
ORRJ0KZ	Replacement of Right Shoulder Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORRK07Z	Replacement of Left Shoulder Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORRK0J6	Replacement of Left Shoulder Joint with Synthetic Substitute, Humeral Surface, Open Approach	ICD-10-PCS	Procedure
ORRK0J7	Replacement of Left Shoulder Joint with Synthetic Substitute, Glenoid Surface, Open Approach	ICD-10-PCS	Procedure
ORRK0JZ	Replacement of Left Shoulder Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
ORRK0KZ	Replacement of Left Shoulder Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORRL07Z	Replacement of Right Elbow Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORRL0JZ	Replacement of Right Elbow Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
ORRL0KZ	Replacement of Right Elbow Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORRM07Z	Replacement of Left Elbow Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORRM0JZ	Replacement of Left Elbow Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
ORRM0KZ	Replacement of Left Elbow Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORSE04Z	Reposition Right Sternoclavicular Joint with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
ORSE0ZZ	Reposition Right Sternoclavicular Joint, Open Approach	ICD-10-PCS	Procedure
ORSF04Z	Reposition Left Sternoclavicular Joint with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Diagnosis and Procedure Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
ORSF0ZZ	Reposition Left Sternoclavicular Joint, Open Approach	ICD-10-PCS	Procedure
ORSG04Z	Reposition Right Acromioclavicular Joint with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
ORSG0ZZ	Reposition Right Acromioclavicular Joint, Open Approach	ICD-10-PCS	Procedure
ORSH04Z	Reposition Left Acromioclavicular Joint with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
ORSH0ZZ	Reposition Left Acromioclavicular Joint, Open Approach	ICD-10-PCS	Procedure
ORSJ04Z	Reposition Right Shoulder Joint with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
ORSJ0ZZ	Reposition Right Shoulder Joint, Open Approach	ICD-10-PCS	Procedure
ORSK04Z	Reposition Left Shoulder Joint with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
ORSK0ZZ	Reposition Left Shoulder Joint, Open Approach	ICD-10-PCS	Procedure
ORUE07Z	Supplement Right Sternoclavicular Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORUE0JZ	Supplement Right Sternoclavicular Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
ORUE0KZ	Supplement Right Sternoclavicular Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORUE37Z	Supplement Right Sternoclavicular Joint with Autologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUE3JZ	Supplement Right Sternoclavicular Joint with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUE3KZ	Supplement Right Sternoclavicular Joint with Nonautologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUE47Z	Supplement Right Sternoclavicular Joint with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUE4JZ	Supplement Right Sternoclavicular Joint with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUE4KZ	Supplement Right Sternoclavicular Joint with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUF07Z	Supplement Left Sternoclavicular Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORUF0JZ	Supplement Left Sternoclavicular Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
ORUF0KZ	Supplement Left Sternoclavicular Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORUF37Z	Supplement Left Sternoclavicular Joint with Autologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUF3JZ	Supplement Left Sternoclavicular Joint with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUF3KZ	Supplement Left Sternoclavicular Joint with Nonautologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUF47Z	Supplement Left Sternoclavicular Joint with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUF4JZ	Supplement Left Sternoclavicular Joint with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUF4KZ	Supplement Left Sternoclavicular Joint with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUG07Z	Supplement Right Acromioclavicular Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORUG0JZ	Supplement Right Acromioclavicular Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
ORUG0KZ	Supplement Right Acromioclavicular Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
ORUG37Z	Supplement Right Acromioclavicular Joint with Autologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUG3JZ	Supplement Right Acromioclavicular Joint with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUG3KZ	Supplement Right Acromioclavicular Joint with Nonautologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUG47Z	Supplement Right Acromioclavicular Joint with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUG4JZ	Supplement Right Acromioclavicular Joint with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUG4KZ	Supplement Right Acromioclavicular Joint with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUH07Z	Supplement Left Acromioclavicular Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORUH0JZ	Supplement Left Acromioclavicular Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
ORUH0KZ	Supplement Left Acromioclavicular Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORUH37Z	Supplement Left Acromioclavicular Joint with Autologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUH3JZ	Supplement Left Acromioclavicular Joint with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUH3KZ	Supplement Left Acromioclavicular Joint with Nonautologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUH47Z	Supplement Left Acromioclavicular Joint with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUH4JZ	Supplement Left Acromioclavicular Joint with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUH4KZ	Supplement Left Acromioclavicular Joint with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUJ07Z	Supplement Right Shoulder Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORUJ0JZ	Supplement Right Shoulder Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
ORUJ0KZ	Supplement Right Shoulder Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORUJ37Z	Supplement Right Shoulder Joint with Autologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUJ3JZ	Supplement Right Shoulder Joint with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUJ3KZ	Supplement Right Shoulder Joint with Nonautologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUJ47Z	Supplement Right Shoulder Joint with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUJ4JZ	Supplement Right Shoulder Joint with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUJ4KZ	Supplement Right Shoulder Joint with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUK07Z	Supplement Left Shoulder Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORUK0JZ	Supplement Left Shoulder Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
ORUK0KZ	Supplement Left Shoulder Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORUK37Z	Supplement Left Shoulder Joint with Autologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUK3JZ	Supplement Left Shoulder Joint with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
ORUK3KZ	Supplement Left Shoulder Joint with Nonautologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUK47Z	Supplement Left Shoulder Joint with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUK4JZ	Supplement Left Shoulder Joint with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUK4KZ	Supplement Left Shoulder Joint with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUL07Z	Supplement Right Elbow Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORUL0JZ	Supplement Right Elbow Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
ORUL0KZ	Supplement Right Elbow Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORUL37Z	Supplement Right Elbow Joint with Autologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUL3JZ	Supplement Right Elbow Joint with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUL3KZ	Supplement Right Elbow Joint with Nonautologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUL47Z	Supplement Right Elbow Joint with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUL4JZ	Supplement Right Elbow Joint with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUL4KZ	Supplement Right Elbow Joint with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUM07Z	Supplement Left Elbow Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORUM0JZ	Supplement Left Elbow Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
ORUM0KZ	Supplement Left Elbow Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
ORUM37Z	Supplement Left Elbow Joint with Autologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUM3JZ	Supplement Left Elbow Joint with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUM3KZ	Supplement Left Elbow Joint with Nonautologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
ORUM47Z	Supplement Left Elbow Joint with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUM4JZ	Supplement Left Elbow Joint with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
ORUM4KZ	Supplement Left Elbow Joint with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OSR9019	Replacement of Right Hip Joint with Metal Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSR901A	Replacement of Right Hip Joint with Metal Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSR901Z	Replacement of Right Hip Joint with Metal Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSR9029	Replacement of Right Hip Joint with Metal on Polyethylene Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSR902A	Replacement of Right Hip Joint with Metal on Polyethylene Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSR902Z	Replacement of Right Hip Joint with Metal on Polyethylene Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSR9039	Replacement of Right Hip Joint with Ceramic Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSR903A	Replacement of Right Hip Joint with Ceramic Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
OSR903Z	Replacement of Right Hip Joint with Ceramic Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSR9049	Replacement of Right Hip Joint with Ceramic on Polyethylene Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSR904A	Replacement of Right Hip Joint with Ceramic on Polyethylene Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSR904Z	Replacement of Right Hip Joint with Ceramic on Polyethylene Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSR907Z	Replacement of Right Hip Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSR90J9	Replacement of Right Hip Joint with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSR90JA	Replacement of Right Hip Joint with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSR90JZ	Replacement of Right Hip Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSR90KZ	Replacement of Right Hip Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRA009	Replacement of Right Hip Joint, Acetabular Surface with Polyethylene Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRA00A	Replacement of Right Hip Joint, Acetabular Surface with Polyethylene Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRA00Z	Replacement of Right Hip Joint, Acetabular Surface with Polyethylene Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRA019	Replacement of Right Hip Joint, Acetabular Surface with Metal Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRA01A	Replacement of Right Hip Joint, Acetabular Surface with Metal Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRA01Z	Replacement of Right Hip Joint, Acetabular Surface with Metal Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRA039	Replacement of Right Hip Joint, Acetabular Surface with Ceramic Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRA03A	Replacement of Right Hip Joint, Acetabular Surface with Ceramic Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRA03Z	Replacement of Right Hip Joint, Acetabular Surface with Ceramic Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRA07Z	Replacement of Right Hip Joint, Acetabular Surface with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRA0J9	Replacement of Right Hip Joint, Acetabular Surface with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRA0JA	Replacement of Right Hip Joint, Acetabular Surface with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRA0JZ	Replacement of Right Hip Joint, Acetabular Surface with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRA0KZ	Replacement of Right Hip Joint, Acetabular Surface with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRB019	Replacement of Left Hip Joint with Metal Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRB01A	Replacement of Left Hip Joint with Metal Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRB01Z	Replacement of Left Hip Joint with Metal Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRB029	Replacement of Left Hip Joint with Metal on Polyethylene Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRB02A	Replacement of Left Hip Joint with Metal on Polyethylene Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
OSRB02Z	Replacement of Left Hip Joint with Metal on Polyethylene Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRB039	Replacement of Left Hip Joint with Ceramic Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRB03A	Replacement of Left Hip Joint with Ceramic Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRB03Z	Replacement of Left Hip Joint with Ceramic Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRB049	Replacement of Left Hip Joint with Ceramic on Polyethylene Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRB04A	Replacement of Left Hip Joint with Ceramic on Polyethylene Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRB04Z	Replacement of Left Hip Joint with Ceramic on Polyethylene Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRB07Z	Replacement of Left Hip Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRB0J9	Replacement of Left Hip Joint with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRB0JA	Replacement of Left Hip Joint with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRB0JZ	Replacement of Left Hip Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRB0KZ	Replacement of Left Hip Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRC07Z	Replacement of Right Knee Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRC0J9	Replacement of Right Knee Joint with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRC0JA	Replacement of Right Knee Joint with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRC0JZ	Replacement of Right Knee Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRC0KZ	Replacement of Right Knee Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRC0L9	Replacement of Right Knee Joint with Unicondylar Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRC0LA	Replacement of Right Knee Joint with Unicondylar Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRC0LZ	Replacement of Right Knee Joint with Unicondylar Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRD07Z	Replacement of Left Knee Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRD0J9	Replacement of Left Knee Joint with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRD0JA	Replacement of Left Knee Joint with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRD0JZ	Replacement of Left Knee Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRD0KZ	Replacement of Left Knee Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRD0L9	Replacement of Left Knee Joint with Unicondylar Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRD0LA	Replacement of Left Knee Joint with Unicondylar Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRD0LZ	Replacement of Left Knee Joint with Unicondylar Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRE009	Replacement of Left Hip Joint, Acetabular Surface with Polyethylene Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRE00A	Replacement of Left Hip Joint, Acetabular Surface with Polyethylene Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRE00Z	Replacement of Left Hip Joint, Acetabular Surface with Polyethylene Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRE019	Replacement of Left Hip Joint, Acetabular Surface with Metal Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Diagnosis and Procedure Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
OSRE01A	Replacement of Left Hip Joint, Acetabular Surface with Metal Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRE01Z	Replacement of Left Hip Joint, Acetabular Surface with Metal Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRE039	Replacement of Left Hip Joint, Acetabular Surface with Ceramic Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRE03A	Replacement of Left Hip Joint, Acetabular Surface with Ceramic Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRE03Z	Replacement of Left Hip Joint, Acetabular Surface with Ceramic Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRE07Z	Replacement of Left Hip Joint, Acetabular Surface with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRE0J9	Replacement of Left Hip Joint, Acetabular Surface with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRE0JA	Replacement of Left Hip Joint, Acetabular Surface with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRE0JZ	Replacement of Left Hip Joint, Acetabular Surface with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRE0KZ	Replacement of Left Hip Joint, Acetabular Surface with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRF07Z	Replacement of Right Ankle Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRF0J9	Replacement of Right Ankle Joint with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRF0JA	Replacement of Right Ankle Joint with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRF0JZ	Replacement of Right Ankle Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRF0KZ	Replacement of Right Ankle Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRG07Z	Replacement of Left Ankle Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRG0J9	Replacement of Left Ankle Joint with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRG0JA	Replacement of Left Ankle Joint with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRG0JZ	Replacement of Left Ankle Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRG0KZ	Replacement of Left Ankle Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRH07Z	Replacement of Right Tarsal Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRH0JZ	Replacement of Right Tarsal Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRH0KZ	Replacement of Right Tarsal Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRJ07Z	Replacement of Left Tarsal Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRJ0JZ	Replacement of Left Tarsal Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRJ0KZ	Replacement of Left Tarsal Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRK07Z	Replacement of Right Metatarsal-Tarsal Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRK0JZ	Replacement of Right Metatarsal-Tarsal Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRK0KZ	Replacement of Right Metatarsal-Tarsal Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRL07Z	Replacement of Left Metatarsal-Tarsal Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRL0JZ	Replacement of Left Metatarsal-Tarsal Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRL0KZ	Replacement of Left Metatarsal-Tarsal Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Diagnosis and Procedure Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
OSRM07Z	Replacement of Right Metatarsal-Phalangeal Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRM0JZ	Replacement of Right Metatarsal-Phalangeal Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRM0KZ	Replacement of Right Metatarsal-Phalangeal Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRN07Z	Replacement of Left Metatarsal-Phalangeal Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRN0JZ	Replacement of Left Metatarsal-Phalangeal Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRN0KZ	Replacement of Left Metatarsal-Phalangeal Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRP07Z	Replacement of Right Toe Phalangeal Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRP0JZ	Replacement of Right Toe Phalangeal Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRP0KZ	Replacement of Right Toe Phalangeal Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRQ07Z	Replacement of Left Toe Phalangeal Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRQ0JZ	Replacement of Left Toe Phalangeal Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRQ0KZ	Replacement of Left Toe Phalangeal Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRR019	Replacement of Right Hip Joint, Femoral Surface with Metal Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRR01A	Replacement of Right Hip Joint, Femoral Surface with Metal Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRR01Z	Replacement of Right Hip Joint, Femoral Surface with Metal Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRR039	Replacement of Right Hip Joint, Femoral Surface with Ceramic Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRR03A	Replacement of Right Hip Joint, Femoral Surface with Ceramic Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRR03Z	Replacement of Right Hip Joint, Femoral Surface with Ceramic Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRR07Z	Replacement of Right Hip Joint, Femoral Surface with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRR0J9	Replacement of Right Hip Joint, Femoral Surface with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRR0JA	Replacement of Right Hip Joint, Femoral Surface with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRR0JZ	Replacement of Right Hip Joint, Femoral Surface with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRR0KZ	Replacement of Right Hip Joint, Femoral Surface with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRS019	Replacement of Left Hip Joint, Femoral Surface with Metal Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRS01A	Replacement of Left Hip Joint, Femoral Surface with Metal Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRS01Z	Replacement of Left Hip Joint, Femoral Surface with Metal Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Diagnosis and Procedure Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
OSRS039	Replacement of Left Hip Joint, Femoral Surface with Ceramic Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRS03A	Replacement of Left Hip Joint, Femoral Surface with Ceramic Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRS03Z	Replacement of Left Hip Joint, Femoral Surface with Ceramic Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRS07Z	Replacement of Left Hip Joint, Femoral Surface with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRS0J9	Replacement of Left Hip Joint, Femoral Surface with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRS0JA	Replacement of Left Hip Joint, Femoral Surface with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRS0JZ	Replacement of Left Hip Joint, Femoral Surface with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRS0KZ	Replacement of Left Hip Joint, Femoral Surface with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRT07Z	Replacement of Right Knee Joint, Femoral Surface with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRT0J9	Replacement of Right Knee Joint, Femoral Surface with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRT0JA	Replacement of Right Knee Joint, Femoral Surface with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRT0JZ	Replacement of Right Knee Joint, Femoral Surface with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRT0KZ	Replacement of Right Knee Joint, Femoral Surface with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRU07Z	Replacement of Left Knee Joint, Femoral Surface with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRU0J9	Replacement of Left Knee Joint, Femoral Surface with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRU0JA	Replacement of Left Knee Joint, Femoral Surface with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRU0JZ	Replacement of Left Knee Joint, Femoral Surface with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRU0KZ	Replacement of Left Knee Joint, Femoral Surface with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRV07Z	Replacement of Right Knee Joint, Tibial Surface with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRV0J9	Replacement of Right Knee Joint, Tibial Surface with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRV0JA	Replacement of Right Knee Joint, Tibial Surface with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRV0JZ	Replacement of Right Knee Joint, Tibial Surface with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRV0KZ	Replacement of Right Knee Joint, Tibial Surface with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRW07Z	Replacement of Left Knee Joint, Tibial Surface with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRW0J9	Replacement of Left Knee Joint, Tibial Surface with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Diagnosis and Procedure Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
OSRW0JA	Replacement of Left Knee Joint, Tibial Surface with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRW0JZ	Replacement of Left Knee Joint, Tibial Surface with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRW0KZ	Replacement of Left Knee Joint, Tibial Surface with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSW90JZ	Revision of Synthetic Substitute in Right Hip Joint, Open Approach	ICD-10-PCS	Procedure
OSW93JZ	Revision of Synthetic Substitute in Right Hip Joint, Percutaneous Approach	ICD-10-PCS	Procedure
OSW94JZ	Revision of Synthetic Substitute in Right Hip Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OSWA0JZ	Revision of Synthetic Substitute in Right Hip Joint, Acetabular Surface, Open Approach	ICD-10-PCS	Procedure
OSWA3JZ	Revision of Synthetic Substitute in Right Hip Joint, Acetabular Surface, Percutaneous Approach	ICD-10-PCS	Procedure
OSWA4JZ	Revision of Synthetic Substitute in Right Hip Joint, Acetabular Surface, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OSWB0JZ	Revision of Synthetic Substitute in Left Hip Joint, Open Approach	ICD-10-PCS	Procedure
OSWB3JZ	Revision of Synthetic Substitute in Left Hip Joint, Percutaneous Approach	ICD-10-PCS	Procedure
OSWB4JZ	Revision of Synthetic Substitute in Left Hip Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OSWC0JC	Revision of Synthetic Substitute in Right Knee Joint, Patellar Surface, Open Approach	ICD-10-PCS	Procedure
OSWC0JZ	Revision of Synthetic Substitute in Right Knee Joint, Open Approach	ICD-10-PCS	Procedure
OSWC3JC	Revision of Synthetic Substitute in Right Knee Joint, Patellar Surface, Percutaneous Approach	ICD-10-PCS	Procedure
OSWC3JZ	Revision of Synthetic Substitute in Right Knee Joint, Percutaneous Approach	ICD-10-PCS	Procedure
OSWC4JC	Revision of Synthetic Substitute in Right Knee Joint, Patellar Surface, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OSWC4JZ	Revision of Synthetic Substitute in Right Knee Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OSWD0JC	Revision of Synthetic Substitute in Left Knee Joint, Patellar Surface, Open Approach	ICD-10-PCS	Procedure
OSWD0JZ	Revision of Synthetic Substitute in Left Knee Joint, Open Approach	ICD-10-PCS	Procedure
OSWD3JC	Revision of Synthetic Substitute in Left Knee Joint, Patellar Surface, Percutaneous Approach	ICD-10-PCS	Procedure
OSWD3JZ	Revision of Synthetic Substitute in Left Knee Joint, Percutaneous Approach	ICD-10-PCS	Procedure
OSWD4JC	Revision of Synthetic Substitute in Left Knee Joint, Patellar Surface, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OSWD4JZ	Revision of Synthetic Substitute in Left Knee Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OSWE0JZ	Revision of Synthetic Substitute in Left Hip Joint, Acetabular Surface, Open Approach	ICD-10-PCS	Procedure
OSWE3JZ	Revision of Synthetic Substitute in Left Hip Joint, Acetabular Surface, Percutaneous Approach	ICD-10-PCS	Procedure
OSWE4JZ	Revision of Synthetic Substitute in Left Hip Joint, Acetabular Surface, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OSWF0JZ	Revision of Synthetic Substitute in Right Ankle Joint, Open Approach	ICD-10-PCS	Procedure
OSWF3JZ	Revision of Synthetic Substitute in Right Ankle Joint, Percutaneous Approach	ICD-10-PCS	Procedure
OSWF4JZ	Revision of Synthetic Substitute in Right Ankle Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OSWG0JZ	Revision of Synthetic Substitute in Left Ankle Joint, Open Approach	ICD-10-PCS	Procedure
OSWG3JZ	Revision of Synthetic Substitute in Left Ankle Joint, Percutaneous Approach	ICD-10-PCS	Procedure
OSWG4JZ	Revision of Synthetic Substitute in Left Ankle Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Diagnosis and Procedure Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
OSWH0JZ	Revision of Synthetic Substitute in Right Tarsal Joint, Open Approach	ICD-10-PCS	Procedure
OSWH3JZ	Revision of Synthetic Substitute in Right Tarsal Joint, Percutaneous Approach	ICD-10-PCS	Procedure
OSWH4JZ	Revision of Synthetic Substitute in Right Tarsal Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OSWJ0JZ	Revision of Synthetic Substitute in Left Tarsal Joint, Open Approach	ICD-10-PCS	Procedure
OSWJ3JZ	Revision of Synthetic Substitute in Left Tarsal Joint, Percutaneous Approach	ICD-10-PCS	Procedure
OSWJ4JZ	Revision of Synthetic Substitute in Left Tarsal Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OSWK0JZ	Revision of Synthetic Substitute in Right Metatarsal-Tarsal Joint, Open Approach	ICD-10-PCS	Procedure
OSWK3JZ	Revision of Synthetic Substitute in Right Metatarsal-Tarsal Joint, Percutaneous Approach	ICD-10-PCS	Procedure
OSWK4JZ	Revision of Synthetic Substitute in Right Metatarsal-Tarsal Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OSWL0JZ	Revision of Synthetic Substitute in Left Metatarsal-Tarsal Joint, Open Approach	ICD-10-PCS	Procedure
OSWL3JZ	Revision of Synthetic Substitute in Left Metatarsal-Tarsal Joint, Percutaneous Approach	ICD-10-PCS	Procedure
OSWL4JZ	Revision of Synthetic Substitute in Left Metatarsal-Tarsal Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OSWM0JZ	Revision of Synthetic Substitute in Right Metatarsal-Phalangeal Joint, Open Approach	ICD-10-PCS	Procedure
OSWM3JZ	Revision of Synthetic Substitute in Right Metatarsal-Phalangeal Joint, Percutaneous Approach	ICD-10-PCS	Procedure
OSWM4JZ	Revision of Synthetic Substitute in Right Metatarsal-Phalangeal Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OSWN0JZ	Revision of Synthetic Substitute in Left Metatarsal-Phalangeal Joint, Open Approach	ICD-10-PCS	Procedure
OSWN3JZ	Revision of Synthetic Substitute in Left Metatarsal-Phalangeal Joint, Percutaneous Approach	ICD-10-PCS	Procedure
OSWN4JZ	Revision of Synthetic Substitute in Left Metatarsal-Phalangeal Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OSWP0JZ	Revision of Synthetic Substitute in Right Toe Phalangeal Joint, Open Approach	ICD-10-PCS	Procedure
OSWP3JZ	Revision of Synthetic Substitute in Right Toe Phalangeal Joint, Percutaneous Approach	ICD-10-PCS	Procedure
OSWP4JZ	Revision of Synthetic Substitute in Right Toe Phalangeal Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OSWQ0JZ	Revision of Synthetic Substitute in Left Toe Phalangeal Joint, Open Approach	ICD-10-PCS	Procedure
OSWQ3JZ	Revision of Synthetic Substitute in Left Toe Phalangeal Joint, Percutaneous Approach	ICD-10-PCS	Procedure
OSWQ4JZ	Revision of Synthetic Substitute in Left Toe Phalangeal Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OSWR0JZ	Revision of Synthetic Substitute in Right Hip Joint, Femoral Surface, Open Approach	ICD-10-PCS	Procedure
OSWR3JZ	Revision of Synthetic Substitute in Right Hip Joint, Femoral Surface, Percutaneous Approach	ICD-10-PCS	Procedure
OSWR4JZ	Revision of Synthetic Substitute in Right Hip Joint, Femoral Surface, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OSWS0JZ	Revision of Synthetic Substitute in Left Hip Joint, Femoral Surface, Open Approach	ICD-10-PCS	Procedure
OSWS3JZ	Revision of Synthetic Substitute in Left Hip Joint, Femoral Surface, Percutaneous Approach	ICD-10-PCS	Procedure
OSWS4JZ	Revision of Synthetic Substitute in Left Hip Joint, Femoral Surface, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OSWT0JZ	Revision of Synthetic Substitute in Right Knee Joint, Femoral Surface, Open Approach	ICD-10-PCS	Procedure
OSWT3JZ	Revision of Synthetic Substitute in Right Knee Joint, Femoral Surface, Percutaneous Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
0SWT4JZ	Revision of Synthetic Substitute in Right Knee Joint, Femoral Surface, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWU0JZ	Revision of Synthetic Substitute in Left Knee Joint, Femoral Surface, Open Approach	ICD-10-PCS	Procedure
0SWU3JZ	Revision of Synthetic Substitute in Left Knee Joint, Femoral Surface, Percutaneous Approach	ICD-10-PCS	Procedure
0SWU4JZ	Revision of Synthetic Substitute in Left Knee Joint, Femoral Surface, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWV0JZ	Revision of Synthetic Substitute in Right Knee Joint, Tibial Surface, Open Approach	ICD-10-PCS	Procedure
0SWV3JZ	Revision of Synthetic Substitute in Right Knee Joint, Tibial Surface, Percutaneous Approach	ICD-10-PCS	Procedure
0SWV4JZ	Revision of Synthetic Substitute in Right Knee Joint, Tibial Surface, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWW0JZ	Revision of Synthetic Substitute in Left Knee Joint, Tibial Surface, Open Approach	ICD-10-PCS	Procedure
0SWW3JZ	Revision of Synthetic Substitute in Left Knee Joint, Tibial Surface, Percutaneous Approach	ICD-10-PCS	Procedure
0SWW4JZ	Revision of Synthetic Substitute in Left Knee Joint, Tibial Surface, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
Kidney Replacement			
55.6	Transplant of kidney	ICD-9-CM	Procedure
55.61	Renal autotransplantation	ICD-9-CM	Procedure
55.69	Other kidney transplantation	ICD-9-CM	Procedure
996.81	Complications of transplanted kidney	ICD-9-CM	Diagnosis
V42.0	Kidney replaced by transplant	ICD-9-CM	Diagnosis
T86.10	Unspecified complication of kidney transplant	ICD-10-CM	Diagnosis
T86.11	Kidney transplant rejection	ICD-10-CM	Diagnosis
T86.12	Kidney transplant failure	ICD-10-CM	Diagnosis
T86.13	Kidney transplant infection	ICD-10-CM	Diagnosis
T86.19	Other complication of kidney transplant	ICD-10-CM	Diagnosis
Z48.22	Encounter for aftercare following kidney transplant	ICD-10-CM	Diagnosis
Z94.0	Kidney transplant status	ICD-10-CM	Diagnosis
0TS00ZZ	Reposition Right Kidney, Open Approach	ICD-10-PCS	Procedure
0TS10ZZ	Reposition Left Kidney, Open Approach	ICD-10-PCS	Procedure
0TY00Z0	Transplantation of Right Kidney, Allogeneic, Open Approach	ICD-10-PCS	Procedure
0TY00Z1	Transplantation of Right Kidney, Syngeneic, Open Approach	ICD-10-PCS	Procedure
0TY00Z2	Transplantation of Right Kidney, Zooplastic, Open Approach	ICD-10-PCS	Procedure
0TY10Z0	Transplantation of Left Kidney, Allogeneic, Open Approach	ICD-10-PCS	Procedure
0TY10Z1	Transplantation of Left Kidney, Syngeneic, Open Approach	ICD-10-PCS	Procedure
0TY10Z2	Transplantation of Left Kidney, Zooplastic, Open Approach	ICD-10-PCS	Procedure
Mitral Stenosis			
394.0	Mitral stenosis	ICD-9-CM	Diagnosis
394.1	Rheumatic mitral insufficiency	ICD-9-CM	Diagnosis
394.2	Mitral stenosis with insufficiency	ICD-9-CM	Diagnosis
396.0	Mitral valve stenosis and aortic valve stenosis	ICD-9-CM	Diagnosis
396.1	Mitral valve stenosis and aortic valve insufficiency	ICD-9-CM	Diagnosis
396.2	Mitral valve insufficiency and aortic valve stenosis	ICD-9-CM	Diagnosis
396.3	Mitral valve insufficiency and aortic valve insufficiency	ICD-9-CM	Diagnosis
746.5	Congenital mitral stenosis	ICD-9-CM	Diagnosis
746.6	Congenital mitral insufficiency	ICD-9-CM	Diagnosis
I05.0	Rheumatic mitral stenosis	ICD-10-CM	Diagnosis

Appendix E. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Diagnosis and Procedure Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
I05.1	Rheumatic mitral insufficiency	ICD-10-CM	Diagnosis
I05.2	Rheumatic mitral stenosis with insufficiency	ICD-10-CM	Diagnosis
I08.0	Rheumatic disorders of both mitral and aortic valves	ICD-10-CM	Diagnosis
I08.3	Combined rheumatic disorders of mitral, aortic and tricuspid valves	ICD-10-CM	Diagnosis
I34.2	Nonrheumatic mitral stenosis	ICD-10-CM	Diagnosis
Q23.2	Congenital mitral stenosis	ICD-10-CM	Diagnosis
Q23.3	Congenital mitral insufficiency	ICD-10-CM	Diagnosis
027G04Z	Dilation of Mitral Valve with Drug-eluting Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
027G0DZ	Dilation of Mitral Valve with Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
027G0ZZ	Dilation of Mitral Valve, Open Approach	ICD-10-PCS	Procedure
02NG0ZZ	Release Mitral Valve, Open Approach	ICD-10-PCS	Procedure
02QG0ZZ	Repair Mitral Valve, Open Approach	ICD-10-PCS	Procedure
02VG0ZZ	Restriction of Mitral Valve, Open Approach	ICD-10-PCS	Procedure
Pulmonary Embolism			
415.1	Pulmonary embolism and infarction	ICD-9-CM	Diagnosis
415.11	Iatrogenic pulmonary embolism and infarction	ICD-9-CM	Diagnosis
415.12	Septic pulmonary embolism	ICD-9-CM	Diagnosis
415.19	Other pulmonary embolism and infarction	ICD-9-CM	Diagnosis
I26.01	Septic pulmonary embolism with acute cor pulmonale	ICD-10-CM	Diagnosis
I26.09	Other pulmonary embolism with acute cor pulmonale	ICD-10-CM	Diagnosis
I26.90	Septic pulmonary embolism without acute cor pulmonale	ICD-10-CM	Diagnosis
I26.99	Other pulmonary embolism without acute cor pulmonale	ICD-10-CM	Diagnosis
T80.0XXA	Air embolism following infusion, transfusion and therapeutic injection, initial encounter	ICD-10-CM	Diagnosis
T81.718A	Complication of other artery following a procedure, not elsewhere classified, initial encounter	ICD-10-CM	Diagnosis
T81.72XA	Complication of vein following a procedure, not elsewhere classified, initial encounter	ICD-10-CM	Diagnosis
T82.817A	Embolism due to cardiac prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T82.818A	Embolism due to vascular prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
Valve Repair			
33400	REPAIR OF AORTIC VALVE	CPT-4	Procedure
33401	VALVULOPLASTY OPEN	CPT-4	Procedure
33403	VALVULOPLASTY W/CP BYPASS	CPT-4	Procedure
33420	REVISION OF MITRAL VALVE	CPT-4	Procedure
33422	REVISION OF MITRAL VALVE	CPT-4	Procedure
33425	REPAIR OF MITRAL VALVE	CPT-4	Procedure
33426	REPAIR OF MITRAL VALVE	CPT-4	Procedure
33427	REPAIR OF MITRAL VALVE	CPT-4	Procedure
33463	VALVULOPLASTY TRICUSPID	CPT-4	Procedure
33464	VALVULOPLASTY TRICUSPID	CPT-4	Procedure
33465	REPLACE TRICUSPID VALVE	CPT-4	Procedure
33470	REVISION OF PULMONARY VALVE	CPT-4	Procedure
33471	VALVOTOMY PULMONARY VALVE	CPT-4	Procedure
33472	REVISION OF PULMONARY VALVE	CPT-4	Procedure
33474	REVISION OF PULMONARY VALVE	CPT-4	Procedure
92986	REVISION OF AORTIC VALVE	CPT-4	Procedure
92987	REVISION OF MITRAL VALVE	CPT-4	Procedure
92990	REVISION OF PULMONARY VALVE	CPT-4	Procedure
Valve Replacement			
V42.2	Heart valve replaced by transplant	ICD-9-CM	Diagnosis

Appendix E. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Diagnosis and Procedure Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
V43.3	Heart valve replaced by other means	ICD-9-CM	Diagnosis
35.2	OPEN & OTHR REPLACEMENT HEART VALVE	ICD-9-CM	Procedure
35.2	OPEN & OTHER REPL UNS HEART VALVE	ICD-9-CM	Procedure
35.21	OPEN OTH REPL AORTIC VALVE TISS GFT	ICD-9-CM	Procedure
35.22	OPEN & OTHR REPLACEMENT AORTIC VALVE	ICD-9-CM	Procedure
35.23	OPN OTH REPL MITRL VALVE TISS GRAFT	ICD-9-CM	Procedure
35.24	OPEN & OTHER REPLACEMENT MITRAL VALVE	ICD-9-CM	Procedure
35.25	OPEN OTH REPL PULM VALVE TISS GRAFT	ICD-9-CM	Procedure
35.26	OPEN & OTHER REPL PULMONARY VALVE	ICD-9-CM	Procedure
35.27	OPEN & OTH REPL TV W/TISSUE GRAFT	ICD-9-CM	Procedure
35.28	OPEN & OTHER REPL TRICUSPD VALVE	ICD-9-CM	Procedure
33405	REPLACEMENT OF AORTIC VALVE	CPT-4	Procedure
33406	REPLACEMENT OF AORTIC VALVE	CPT-4	Procedure
33410	REPLACEMENT OF AORTIC VALVE	CPT-4	Procedure
33411	REPLACEMENT OF AORTIC VALVE	CPT-4	Procedure
33412	REPLACEMENT OF AORTIC VALVE	CPT-4	Procedure
33413	REPLACEMENT OF AORTIC VALVE	CPT-4	Procedure
33430	REPLACEMENT OF MITRAL VALVE	CPT-4	Procedure
33465	REPLACE TRICUSPID VALVE	CPT-4	Procedure
33475	REPLACEMENT PULMONARY VALVE	CPT-4	Procedure
33496	REPAIR PROSTH VALVE CLOT	CPT-4	Procedure
Z95.2	Presence of prosthetic heart valve	ICD-10-CM	Diagnosis
Z95.3	Presence of xenogenic heart valve	ICD-10-CM	Diagnosis
Z95.4	Presence of other heart-valve replacement	ICD-10-CM	Diagnosis
02RF07Z	Replacement of Aortic Valve with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02RF08Z	Replacement of Aortic Valve with Zooplasic Tissue, Open Approach	ICD-10-PCS	Procedure
02RF0JZ	Replacement of Aortic Valve with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02RF0KZ	Replacement of Aortic Valve with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02RF47Z	Replacement of Aortic Valve with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RF48Z	Replacement of Aortic Valve with Zooplasic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RF4JZ	Replacement of Aortic Valve with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RF4KZ	Replacement of Aortic Valve with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RG07Z	Replacement of Mitral Valve with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02RG08Z	Replacement of Mitral Valve with Zooplasic Tissue, Open Approach	ICD-10-PCS	Procedure
02RG0JZ	Replacement of Mitral Valve with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02RG0KZ	Replacement of Mitral Valve with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02RG37Z	Replacement of Mitral Valve with Autologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
02RG38Z	Replacement of Mitral Valve with Zooplasic Tissue, Percutaneous Approach	ICD-10-PCS	Procedure
02RG3JZ	Replacement of Mitral Valve with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
02RG3KZ	Replacement of Mitral Valve with Nonautologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
02RG47Z	Replacement of Mitral Valve with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RG48Z	Replacement of Mitral Valve with Zooplasic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RG4JZ	Replacement of Mitral Valve with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Diagnosis and Procedure Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
02RG4KZ	Replacement of Mitral Valve with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RH07Z	Replacement of Pulmonary Valve with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02RH08Z	Replacement of Pulmonary Valve with Zooplasic Tissue, Open Approach	ICD-10-PCS	Procedure
02RH0JZ	Replacement of Pulmonary Valve with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02RH0KZ	Replacement of Pulmonary Valve with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02RH47Z	Replacement of Pulmonary Valve with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RH48Z	Replacement of Pulmonary Valve with Zooplasic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RH4JZ	Replacement of Pulmonary Valve with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RH4KZ	Replacement of Pulmonary Valve with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RJ07Z	Replacement of Tricuspid Valve with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02RJ08Z	Replacement of Tricuspid Valve with Zooplasic Tissue, Open Approach	ICD-10-PCS	Procedure
02RJ0JZ	Replacement of Tricuspid Valve with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02RJ0KZ	Replacement of Tricuspid Valve with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02RJ47Z	Replacement of Tricuspid Valve with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RJ48Z	Replacement of Tricuspid Valve with Zooplasic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RJ4JZ	Replacement of Tricuspid Valve with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RJ4KZ	Replacement of Tricuspid Valve with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
X2RF03Z	Replacement of Aortic Valve using Zooplasic Tissue, Rapid Deployment Technique, Open Approach, New Technology Group 2	ICD-10-PCS	Procedure
X2RF43Z	Replacement of Aortic Valve using Zooplasic Tissue, Rapid Deployment Technique, Percutaneous Endoscopic Approach, New Technology Group 2	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Diagnosis and Procedure Codes Used to Define Censoring Criteria in this Request

Code	Description	Code Type	Code Category
Dialysis			
792.5	Cloudy (hemodialysis) (peritoneal) dialysis affluent	ICD-9-CM	Diagnosis
V45.1	Renal dialysis status	ICD-9-CM	Diagnosis
V45.11	Renal dialysis status	ICD-9-CM	Diagnosis
V45.12	Noncompliance with renal dialysis	ICD-9-CM	Diagnosis
V56.0	Encounter for extracorporeal dialysis	ICD-9-CM	Diagnosis
V56.1	Fitting and adjustment of extracorporeal dialysis catheter	ICD-9-CM	Diagnosis
V56.2	Fitting and adjustment of peritoneal dialysis catheter	ICD-9-CM	Diagnosis
V56.3	Encounter for adequacy testing for dialysis	ICD-9-CM	Diagnosis
V56.31	Encounter for adequacy testing for hemodialysis	ICD-9-CM	Diagnosis
V56.32	Encounter for adequacy testing for peritoneal dialysis	ICD-9-CM	Diagnosis
V56.8	Encounter other dialysis	ICD-9-CM	Diagnosis
R88.0	Cloudy (hemodialysis) (peritoneal) dialysis effluent	ICD-10-CM	Diagnosis
Z49.01	Encounter for fitting and adjustment of extracorporeal dialysis catheter	ICD-10-CM	Diagnosis
Z49.02	Encounter for fitting and adjustment of peritoneal dialysis catheter	ICD-10-CM	Diagnosis
Z49.31	Encounter for adequacy testing for hemodialysis	ICD-10-CM	Diagnosis
Z49.32	Encounter for adequacy testing for peritoneal dialysis	ICD-10-CM	Diagnosis
Z91.15	Patient's noncompliance with renal dialysis	ICD-10-CM	Diagnosis
Z99.2	Dependence on renal dialysis	ICD-10-CM	Diagnosis
90935	Hemodialysis procedure with single evaluation by a physician or other qualified health care professional	CPT-4	Procedure
90937	Hemodialysis procedure requiring repeated evaluation(s) with or without substantial revision of dialysis prescription	CPT-4	Procedure
90939	Hemodialysis access flow study to determine blood flow in grafts and arteriovenous fistulae by an indicator dilution method, hook-up; transcutaneous measurement and disconnection	CPT-4	Procedure
90940	Hemodialysis access flow study to determine blood flow in grafts and arteriovenous fistulae by an indicator method	CPT-4	Procedure
90941	Hemodialysis, For Acute Renal Failure And Or Intoxication,	CPT-4	Procedure
90942	Hemodialysis, For Acute Renal Failure And Or Intoxication,	CPT-4	Procedure
90943	Hemodialysis, For Acute Renal Failure And Or Intoxication,	CPT-4	Procedure
90944	Hemodialysis, For Acute Renal Failure And Or Intoxication,	CPT-4	Procedure
90945	Dialysis procedure other than hemodialysis (eg, peritoneal dialysis, hemofiltration, or other continuous renal replacement therapies), with single evaluation by a physician or other qualified health care professional	CPT-4	Procedure
90947	Dialysis procedure other than hemodialysis (eg, peritoneal dialysis, hemofiltration, or other continuous renal replacement therapies) requiring repeated evaluations by a physician or other qualified health care professional, with or without substantial revision of dialysis prescription	CPT-4	Procedure
90951	End-stage renal disease (ESRD) related services monthly, for patients younger than 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 4 or more face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure
90952	End-stage renal disease (ESRD) related services monthly, for patients younger than 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 2-3 face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Diagnosis and Procedure Codes Used to Define Censoring Criteria in this Request

Code	Description	Code Type	Code Category
90953	End-stage renal disease (ESRD) related services monthly, for patients younger than 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 1 face-to-face visit by a physician or other qualified health care professional per month	CPT-4	Procedure
90954	End-stage renal disease (ESRD) related services monthly, for patients 2-11 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 4 or more face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure
90955	End-stage renal disease (ESRD) related services monthly, for patients 2-11 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 2-3 face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure
90956	End-stage renal disease (ESRD) related services monthly, for patients 2-11 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 1 face-to-face visit by a physician or other qualified health care professional per month	CPT-4	Procedure
90957	End-stage renal disease (ESRD) related services monthly, for patients 12-19 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 4 or more face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure
90958	End-stage renal disease (ESRD) related services monthly, for patients 12-19 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 2-3 face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure
90959	End-stage renal disease (ESRD) related services monthly, for patients 12-19 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 1 face-to-face visit by a physician or other qualified health care professional per month	CPT-4	Procedure
90960	End-stage renal disease (ESRD) related services monthly, for patients 20 years of age and older; with 4 or more face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure
90961	End-stage renal disease (ESRD) related services monthly, for patients 20 years of age and older; with 2-3 face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure
90962	End-stage renal disease (ESRD) related services monthly, for patients 20 years of age and older; with 1 face-to-face visit by a physician or other qualified health care professional per month	CPT-4	Procedure
90963	End-stage renal disease (ESRD) related services for home dialysis per full month, for patients younger than 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents	CPT-4	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Diagnosis and Procedure Codes Used to Define Censoring Criteria in this Request

Code	Description	Code Type	Code Category
90964	End-stage renal disease (ESRD) related services for home dialysis per full month, for patients 2-11 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents	CPT-4	Procedure
90965	End-stage renal disease (ESRD) related services for home dialysis per full month, for patients 12-19 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents	CPT-4	Procedure
90966	End-stage renal disease (ESRD) related services for home dialysis per full month, for patients 20 years of age and older	CPT-4	Procedure
90967	End-stage renal disease (ESRD) related services for dialysis less than a full month of service, per day; for patients younger than 2 years of age	CPT-4	Procedure
90968	End-stage renal disease (ESRD) related services for dialysis less than a full month of service, per day; for patients 2-11 years of age	CPT-4	Procedure
90969	End-stage renal disease (ESRD) related services for dialysis less than a full month of service, per day; for patients 12-19 years of age	CPT-4	Procedure
90970	End-stage renal disease (ESRD) related services for dialysis less than a full month of service, per day; for patients 20 years of age and older	CPT-4	Procedure
90976	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90977	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90978	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90979	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90982	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90983	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90984	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90985	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90988	Supervision Of Hemodialysis In Hospital Or Other Facility (excluding Home Dialysis), On Monthly Basis	CPT-4	Procedure
90989	Dialysis training, patient, including helper where applicable, any mode, completed course	CPT-4	Procedure
90990	Hemodialysis Training And/or Counseling	CPT-4	Procedure
90991	Home Hemodialysis Care, Outpatient, For Those Services Either Provided By The Physician Primarily Responsible	CPT-4	Procedure
90992	Peritoneal Dialysis Training And/or Counseling	CPT-4	Procedure
90993	Dialysis training, patient, including helper where applicable, any mode, course not completed, per training session	CPT-4	Procedure
90994	Supervision Of Chronic Ambulatory Peritoneal Dialysis (capd), Home Or Out-patient (monthly)	CPT-4	Procedure
90995	End Stage Renal Disease (esrd) Related Services, Per Full Month	CPT-4	Procedure
90996	Continuous Arteriovenous Hemofiltration (cavh) (per Day)	CPT-4	Procedure
90997	Hemoperfusion (eg, with activated charcoal or resin)	CPT-4	Procedure
90998	End Stage Renal Disease (esrd) Related Services (less Than Full Month), Per Day	CPT-4	Procedure
90999	Unlisted dialysis procedure, inpatient or outpatient	CPT-4	Procedure
Kidney Replacement			
996.81	Complications of transplanted kidney	ICD-9-CM	Diagnosis
V42.0	Kidney replaced by transplant	ICD-9-CM	Diagnosis
55.6	Transplant of kidney	ICD-9-CM	Procedure
55.61	Renal autotransplantation	ICD-9-CM	Procedure
55.69	Other kidney transplantation	ICD-9-CM	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Diagnosis and Procedure Codes Used to Define Censoring Criteria in this Request

Code	Description	Code Type	Code Category
T86.10	Unspecified complication of kidney transplant	ICD-10-CM	Diagnosis
T86.11	Kidney transplant rejection	ICD-10-CM	Diagnosis
T86.12	Kidney transplant failure	ICD-10-CM	Diagnosis
T86.13	Kidney transplant infection	ICD-10-CM	Diagnosis
T86.19	Other complication of kidney transplant	ICD-10-CM	Diagnosis
Z48.22	Encounter for aftercare following kidney transplant	ICD-10-CM	Diagnosis
Z94.0	Kidney transplant status	ICD-10-CM	Diagnosis
0TS00ZZ	Reposition Right Kidney, Open Approach	ICD-10-PCS	Procedure
0TS10ZZ	Reposition Left Kidney, Open Approach	ICD-10-PCS	Procedure
0TY00Z0	Transplantation of Right Kidney, Allogeneic, Open Approach	ICD-10-PCS	Procedure
0TY00Z1	Transplantation of Right Kidney, Syngeneic, Open Approach	ICD-10-PCS	Procedure
0TY00Z2	Transplantation of Right Kidney, Zooplastic, Open Approach	ICD-10-PCS	Procedure
0TY10Z0	Transplantation of Left Kidney, Allogeneic, Open Approach	ICD-10-PCS	Procedure
0TY10Z1	Transplantation of Left Kidney, Syngeneic, Open Approach	ICD-10-PCS	Procedure
0TY10Z2	Transplantation of Left Kidney, Zooplastic, Open Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
Acute Myocardial Infarction			
410	Acute myocardial infarction	ICD-9-CM	Diagnosis
410.0	Acute myocardial infarction of anterolateral wall	ICD-9-CM	Diagnosis
410.00	Acute myocardial infarction of anterolateral wall, episode of care unspecified	ICD-9-CM	Diagnosis
410.01	Acute myocardial infarction of anterolateral wall, initial episode of care	ICD-9-CM	Diagnosis
410.02	Acute myocardial infarction of anterolateral wall, subsequent episode of care	ICD-9-CM	Diagnosis
410.1	Acute myocardial infarction of other anterior wall	ICD-9-CM	Diagnosis
410.10	Acute myocardial infarction of other anterior wall, episode of care unspecified	ICD-9-CM	Diagnosis
410.11	Acute myocardial infarction of other anterior wall, initial episode of care	ICD-9-CM	Diagnosis
410.12	Acute myocardial infarction of other anterior wall, subsequent episode of care	ICD-9-CM	Diagnosis
410.2	Acute myocardial infarction of inferolateral wall	ICD-9-CM	Diagnosis
410.20	Acute myocardial infarction of inferolateral wall, episode of care unspecified	ICD-9-CM	Diagnosis
410.21	Acute myocardial infarction of inferolateral wall, initial episode of care	ICD-9-CM	Diagnosis
410.22	Acute myocardial infarction of inferolateral wall, subsequent episode of care	ICD-9-CM	Diagnosis
410.3	Acute myocardial infarction of inferoposterior wall	ICD-9-CM	Diagnosis
410.30	Acute myocardial infarction of inferoposterior wall, episode of care unspecified	ICD-9-CM	Diagnosis
410.31	Acute myocardial infarction of inferoposterior wall, initial episode of care	ICD-9-CM	Diagnosis
410.32	Acute myocardial infarction of inferoposterior wall, subsequent episode of care	ICD-9-CM	Diagnosis
410.4	Acute myocardial infarction of other inferior wall	ICD-9-CM	Diagnosis
410.40	Acute myocardial infarction of other inferior wall, episode of care unspecified	ICD-9-CM	Diagnosis
410.41	Acute myocardial infarction of other inferior wall, initial episode of care	ICD-9-CM	Diagnosis
410.42	Acute myocardial infarction of other inferior wall, subsequent episode of care	ICD-9-CM	Diagnosis
410.5	Acute myocardial infarction of other lateral wall	ICD-9-CM	Diagnosis
410.50	Acute myocardial infarction of other lateral wall, episode of care unspecified	ICD-9-CM	Diagnosis
410.51	Acute myocardial infarction of other lateral wall, initial episode of care	ICD-9-CM	Diagnosis
410.52	Acute myocardial infarction of other lateral wall, subsequent episode of care	ICD-9-CM	Diagnosis
410.6	Acute myocardial infarction, true posterior wall infarction	ICD-9-CM	Diagnosis
410.60	Acute myocardial infarction, true posterior wall infarction, episode of care unspecified	ICD-9-CM	Diagnosis
410.61	Acute myocardial infarction, true posterior wall infarction, initial episode of care	ICD-9-CM	Diagnosis
410.62	Acute myocardial infarction, true posterior wall infarction, subsequent episode of care	ICD-9-CM	Diagnosis
410.7	Acute myocardial infarction, subendocardial infarction	ICD-9-CM	Diagnosis
410.70	Acute myocardial infarction, subendocardial infarction, episode of care unspecified	ICD-9-CM	Diagnosis
410.71	Acute myocardial infarction, subendocardial infarction, initial episode of care	ICD-9-CM	Diagnosis
410.72	Acute myocardial infarction, subendocardial infarction, subsequent episode of care	ICD-9-CM	Diagnosis
410.8	Acute myocardial infarction of other specified sites	ICD-9-CM	Diagnosis
410.80	Acute myocardial infarction of other specified sites, episode of care unspecified	ICD-9-CM	Diagnosis
410.81	Acute myocardial infarction of other specified sites, initial episode of care	ICD-9-CM	Diagnosis
410.82	Acute myocardial infarction of other specified sites, subsequent episode of care	ICD-9-CM	Diagnosis
410.9	Acute myocardial infarction, unspecified site	ICD-9-CM	Diagnosis
410.90	Acute myocardial infarction, unspecified site, episode of care unspecified	ICD-9-CM	Diagnosis
410.91	Acute myocardial infarction, unspecified site, initial episode of care	ICD-9-CM	Diagnosis
410.92	Acute myocardial infarction, unspecified site, subsequent episode of care	ICD-9-CM	Diagnosis
I21.01	ST elevation (STEMI) myocardial infarction involving left main coronary artery	ICD-10-CM	Diagnosis
I21.02	ST elevation (STEMI) myocardial infarction involving left anterior descending coronary artery	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
I21.09	ST elevation (STEMI) myocardial infarction involving other coronary artery of anterior wall	ICD-10-CM	Diagnosis
I21.11	ST elevation (STEMI) myocardial infarction involving right coronary artery	ICD-10-CM	Diagnosis
I21.19	ST elevation (STEMI) myocardial infarction involving other coronary artery of inferior wall	ICD-10-CM	Diagnosis
I21.21	ST elevation (STEMI) myocardial infarction involving left circumflex coronary artery	ICD-10-CM	Diagnosis
I21.29	ST elevation (STEMI) myocardial infarction involving other sites	ICD-10-CM	Diagnosis
I21.3	ST elevation (STEMI) myocardial infarction of unspecified site	ICD-10-CM	Diagnosis
I21.4	Non-ST elevation (NSTEMI) myocardial infarction	ICD-10-CM	Diagnosis
I21.9	Acute myocardial infarction, unspecified	ICD-10-CM	Diagnosis
I21.A1	Myocardial infarction type 2	ICD-10-CM	Diagnosis
I21.A9	Other myocardial infarction type	ICD-10-CM	Diagnosis
I22.0	Subsequent ST elevation (STEMI) myocardial infarction of anterior wall	ICD-10-CM	Diagnosis
I22.1	Subsequent ST elevation (STEMI) myocardial infarction of inferior wall	ICD-10-CM	Diagnosis
I22.2	Subsequent non-ST elevation (NSTEMI) myocardial infarction	ICD-10-CM	Diagnosis
I22.8	Subsequent ST elevation (STEMI) myocardial infarction of other sites	ICD-10-CM	Diagnosis
I22.9	Subsequent ST elevation (STEMI) myocardial infarction of unspecified site	ICD-10-CM	Diagnosis
Acute Kidney Failure			
584	Acute kidney failure	ICD-9-CM	Diagnosis
584.5	Acute kidney failure with lesion of tubular necrosis	ICD-9-CM	Diagnosis
584.6	Acute kidney failure with lesion of renal cortical necrosis	ICD-9-CM	Diagnosis
584.7	Acute kidney failure with lesion of medullary [papillary] necrosis	ICD-9-CM	Diagnosis
584.8	Acute kidney failure with other specified pathological lesion in kidney	ICD-9-CM	Diagnosis
584.9	Acute kidney failure, unspecified	ICD-9-CM	Diagnosis
N17.0	Acute kidney failure with tubular necrosis	ICD-10-CM	Diagnosis
N17.1	Acute kidney failure with acute cortical necrosis	ICD-10-CM	Diagnosis
N17.2	Acute kidney failure with medullary necrosis	ICD-10-CM	Diagnosis
N17.8	Other acute kidney failure	ICD-10-CM	Diagnosis
N17.9	Acute kidney failure, unspecified	ICD-10-CM	Diagnosis
Anticoagulants			
C9121	Injection, argatroban, per 5 mg	HCPCS	Procedure
J0583	Injection, bivalirudin, 1 mg	HCPCS	Procedure
J1644	Injection, Heparin sodium, per 1000 units	HCPCS	Procedure
J1645	Injection, dalteparin sodium, per 2500 IU	HCPCS	Procedure
J1650	Injection, enoxaparin sodium, 10 mg	HCPCS	Procedure
J1652	Injection, fondaparinux sodium, 0.5 mg	HCPCS	Procedure
J1655	Injection, tinzaparin sodium, 1000 IU	HCPCS	Procedure
J1945	Injection, lepirudin, 50 mg	HCPCS	Procedure
Cardiac Ablation			
37.33	Excision or destruction of other lesion or tissue of heart, open approach	ICD-9-CM	Procedure
37.34	Excision or destruction of other lesion or tissue of heart, other approach	ICD-9-CM	Procedure
33250	Operative ablation of supraventricular arrhythmogenic focus or pathway (eg, Wolff-Parkinson-White, atrioventricular node re-entry), tract(s) and/or focus (foci); without cardiopulmonary bypass	CPT-4	Procedure

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Code	Description	Code Type	Code Category
33251	Operative ablation of supraventricular arrhythmogenic focus or pathway (eg, Wolff-Parkinson-White, atrioventricular node re-entry), tract(s) and/or focus (foci); with cardiopulmonary bypass	CPT-4	Procedure
33254	Operative tissue ablation and reconstruction of atria, limited (eg, modified maze procedure)	CPT-4	Procedure
33255	Operative tissue ablation and reconstruction of atria, extensive (eg, maze procedure); without cardiopulmonary bypass	CPT-4	Procedure
33256	Operative tissue ablation and reconstruction of atria, extensive (eg, maze procedure); with cardiopulmonary bypass	CPT-4	Procedure
33257	Operative tissue ablation and reconstruction of atria, performed at the time of other cardiac procedure(s), limited (eg, modified maze procedure) (List separately in addition to code for primary procedure)	CPT-4	Procedure
33258	Operative tissue ablation and reconstruction of atria, performed at the time of other cardiac procedure(s), extensive (eg, maze procedure), without cardiopulmonary bypass (List separately in addition to code for primary procedure)	CPT-4	Procedure
33259	Operative tissue ablation and reconstruction of atria, performed at the time of other cardiac procedure(s), extensive (eg, maze procedure), with cardiopulmonary bypass (List separately in addition to code for primary procedure)	CPT-4	Procedure
33261	Operative ablation of ventricular arrhythmogenic focus with cardiopulmonary bypass	CPT-4	Procedure
33265	Endoscopy, surgical; operative tissue ablation and reconstruction of atria, limited (eg, modified maze procedure), without cardiopulmonary bypass	CPT-4	Procedure
33266	Endoscopy, surgical; operative tissue ablation and reconstruction of atria, extensive (eg, maze procedure), without cardiopulmonary bypass	CPT-4	Procedure
93650	Intracardiac catheter ablation of atrioventricular node function, atrioventricular conduction for creation of complete heart block, with or without temporary pacemaker placement	CPT-4	Procedure
93651	Intracardiac catheter ablation of arrhythmogenic focus; for treatment of supraventricular tachycardia by ablation of fast or slow atrioventricular pathways, accessory atrioventricular connections or other atrial foci, singly or in combination	CPT-4	Procedure
93652	Intracardiac catheter ablation of arrhythmogenic focus; for treatment of ventricular tachycardia	CPT-4	Procedure
C1732	Catheter, electrophysiology, diagnostic/ablation, 3D or vector mapping	HCPCS	Procedure
C1733	Catheter, electrophysiology, diagnostic/ablation, other than 3D or vector mapping, other than cool-tip	HCPCS	Procedure

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Code	Description	Code Type	Code Category
C2630	Catheter, electrophysiology, diagnostic/ablation, other than 3D or vector mapping, cool-tip	HCPCS	Procedure
02550ZZ	Destruction of Atrial Septum, Open Approach	ICD-10-PCS	Procedure
02553ZZ	Destruction of Atrial Septum, Percutaneous Approach	ICD-10-PCS	Procedure
02560ZZ	Destruction of Right Atrium, Open Approach	ICD-10-PCS	Procedure
02563ZZ	Destruction of Right Atrium, Percutaneous Approach	ICD-10-PCS	Procedure
02570ZZ	Destruction of Left Atrium, Open Approach	ICD-10-PCS	Procedure
02573ZZ	Destruction of Left Atrium, Percutaneous Approach	ICD-10-PCS	Procedure
02580ZZ	Destruction of Conduction Mechanism, Open Approach	ICD-10-PCS	Procedure
02583ZZ	Destruction of Conduction Mechanism, Percutaneous Approach	ICD-10-PCS	Procedure
02590ZZ	Destruction of Chordae Tendineae, Open Approach	ICD-10-PCS	Procedure
02593ZZ	Destruction of Chordae Tendineae, Percutaneous Approach	ICD-10-PCS	Procedure
025F0ZZ	Destruction of Aortic Valve, Open Approach	ICD-10-PCS	Procedure
025F3ZZ	Destruction of Aortic Valve, Percutaneous Approach	ICD-10-PCS	Procedure
025G0ZZ	Destruction of Mitral Valve, Open Approach	ICD-10-PCS	Procedure
025G3ZZ	Destruction of Mitral Valve, Percutaneous Approach	ICD-10-PCS	Procedure
025H0ZZ	Destruction of Pulmonary Valve, Open Approach	ICD-10-PCS	Procedure
025H3ZZ	Destruction of Pulmonary Valve, Percutaneous Approach	ICD-10-PCS	Procedure
025J0ZZ	Destruction of Tricuspid Valve, Open Approach	ICD-10-PCS	Procedure
025J3ZZ	Destruction of Tricuspid Valve, Percutaneous Approach	ICD-10-PCS	Procedure
025K0ZZ	Destruction of Right Ventricle, Open Approach	ICD-10-PCS	Procedure
025K3ZZ	Destruction of Right Ventricle, Percutaneous Approach	ICD-10-PCS	Procedure
025L0ZZ	Destruction of Left Ventricle, Open Approach	ICD-10-PCS	Procedure
025L3ZZ	Destruction of Left Ventricle, Percutaneous Approach	ICD-10-PCS	Procedure
025M0ZZ	Destruction of Ventricular Septum, Open Approach	ICD-10-PCS	Procedure
025M3ZZ	Destruction of Ventricular Septum, Percutaneous Approach	ICD-10-PCS	Procedure
02B50ZZ	Excision of Atrial Septum, Open Approach	ICD-10-PCS	Procedure
02B53ZZ	Excision of Atrial Septum, Percutaneous Approach	ICD-10-PCS	Procedure
02B60ZZ	Excision of Right Atrium, Open Approach	ICD-10-PCS	Procedure
02B63ZZ	Excision of Right Atrium, Percutaneous Approach	ICD-10-PCS	Procedure
02B70ZZ	Excision of Left Atrium, Open Approach	ICD-10-PCS	Procedure
02B73ZZ	Excision of Left Atrium, Percutaneous Approach	ICD-10-PCS	Procedure
02B80ZZ	Excision of Conduction Mechanism, Open Approach	ICD-10-PCS	Procedure
02B83ZZ	Excision of Conduction Mechanism, Percutaneous Approach	ICD-10-PCS	Procedure
02B90ZZ	Excision of Chordae Tendineae, Open Approach	ICD-10-PCS	Procedure
02B93ZZ	Excision of Chordae Tendineae, Percutaneous Approach	ICD-10-PCS	Procedure
02BF0ZZ	Excision of Aortic Valve, Open Approach	ICD-10-PCS	Procedure
02BF3ZZ	Excision of Aortic Valve, Percutaneous Approach	ICD-10-PCS	Procedure
02BG0ZZ	Excision of Mitral Valve, Open Approach	ICD-10-PCS	Procedure
02BG3ZZ	Excision of Mitral Valve, Percutaneous Approach	ICD-10-PCS	Procedure
02BH0ZZ	Excision of Pulmonary Valve, Open Approach	ICD-10-PCS	Procedure
02BH3ZZ	Excision of Pulmonary Valve, Percutaneous Approach	ICD-10-PCS	Procedure
02BJ0ZZ	Excision of Tricuspid Valve, Open Approach	ICD-10-PCS	Procedure
02BJ3ZZ	Excision of Tricuspid Valve, Percutaneous Approach	ICD-10-PCS	Procedure
02BK0ZZ	Excision of Right Ventricle, Open Approach	ICD-10-PCS	Procedure
02BK3ZZ	Excision of Right Ventricle, Percutaneous Approach	ICD-10-PCS	Procedure
02BL0ZZ	Excision of Left Ventricle, Open Approach	ICD-10-PCS	Procedure
02BL3ZZ	Excision of Left Ventricle, Percutaneous Approach	ICD-10-PCS	Procedure
02BM0ZZ	Excision of Ventricular Septum, Open Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
02BM3ZZ	Excision of Ventricular Septum, Percutaneous Approach	ICD-10-PCS	Procedure
02T80ZZ	Resection of Conduction Mechanism, Open Approach	ICD-10-PCS	Procedure
02T83ZZ	Resection of Conduction Mechanism, Percutaneous Approach	ICD-10-PCS	Procedure
C2618	Probe/needle, cryoablation	HCPCS	Procedure
Cardioversion			
99.61	Atrial cardioversion	ICD-9-CM	Procedure
99.62	Other electric countershock of heart	ICD-9-CM	Procedure
92960	External shock to heart to regulate heart beat	CPT-4	Procedure
92961	Internal shock to heart to regulate heart beat	CPT-4	Procedure
5A2204Z	Restoration of Cardiac Rhythm, Single	ICD-10-PCS	Procedure
Chronic Kidney Failure			
585	Chronic kidney disease (CKD)	ICD-9-CM	Diagnosis
585.1	Chronic kidney disease, Stage I	ICD-9-CM	Diagnosis
585.2	Chronic kidney disease, Stage II (mild)	ICD-9-CM	Diagnosis
585.3	Chronic kidney disease, Stage III (moderate)	ICD-9-CM	Diagnosis
585.4	Chronic kidney disease, Stage IV (severe)	ICD-9-CM	Diagnosis
585.5	Chronic kidney disease, Stage V	ICD-9-CM	Diagnosis
585.6	End stage renal disease	ICD-9-CM	Diagnosis
585.9	Chronic kidney disease, unspecified	ICD-9-CM	Diagnosis
586	Unspecified renal failure	ICD-9-CM	Diagnosis
587	Unspecified renal sclerosis	ICD-9-CM	Diagnosis
N18.1	Chronic kidney disease, stage 1	ICD-10-CM	Diagnosis
N18.2	Chronic kidney disease, stage 2 (mild)	ICD-10-CM	Diagnosis
N18.3	Chronic kidney disease, stage 3 (moderate)	ICD-10-CM	Diagnosis
N18.4	Chronic kidney disease, stage 4 (severe)	ICD-10-CM	Diagnosis
N18.5	Chronic kidney disease, stage 5	ICD-10-CM	Diagnosis
N18.6	End stage renal disease	ICD-10-CM	Diagnosis
N18.9	Chronic kidney disease, unspecified	ICD-10-CM	Diagnosis
N19	Unspecified kidney failure	ICD-10-CM	Diagnosis
N26.1	Atrophy of kidney (terminal)	ICD-10-CM	Diagnosis
N26.9	Renal sclerosis, unspecified	ICD-10-CM	Diagnosis
Coronary Revascularization			
V4581	Postprocedural aortocoronary bypass status	ICD-9-CM	Procedure
V4582	Postprocedural percutaneous transluminal coronary angioplasty status	ICD-9-CM	Procedure
V4588	Status post administration of tPA (rtPA) in a different facility within the last 24 hours prior to admission to current facility	ICD-9-CM	Procedure
00.66	Percutaneous transluminal coronary angioplasty [PTCA] or coronary atherectomy	ICD-9-CM	Procedure
36.0	Removal of coronary artery obstruction and insertion of stent(s)	ICD-9-CM	Procedure
36.03	Open chest coronary artery angioplasty	ICD-9-CM	Procedure
36.04	Intracoronary artery thrombolytic infusion	ICD-9-CM	Procedure
36.06	Insertion of non-drug-eluting coronary artery stent(s)	ICD-9-CM	Procedure
36.07	Insertion of drug-eluting coronary artery stent(s)	ICD-9-CM	Procedure
36.09	Other removal of coronary artery obstruction	ICD-9-CM	Procedure
36.1	Bypass anastomosis for heart revascularization	ICD-9-CM	Procedure
36.10	Aortocoronary bypass for heart revascularization, not otherwise specified	ICD-9-CM	Procedure
36.11	(Aorto)coronary bypass of one coronary artery	ICD-9-CM	Procedure
36.12	(Aorto)coronary bypass of two coronary arteries	ICD-9-CM	Procedure
36.13	(Aorto)coronary bypass of three coronary arteries	ICD-9-CM	Procedure
36.14	(Aorto)coronary bypass of four or more coronary arteries	ICD-9-CM	Procedure

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Code	Description	Code Type	Code Category
36.15	Single internal mammary-coronary artery bypass	ICD-9-CM	Procedure
36.16	Double internal mammary-coronary artery bypass	ICD-9-CM	Procedure
36.17	Abdominal-coronary artery bypass	ICD-9-CM	Procedure
36.19	Other bypass anastomosis for heart revascularization	ICD-9-CM	Procedure
36.2	Heart revascularization by arterial implant	ICD-9-CM	Procedure
36.3	Other heart revascularization	ICD-9-CM	Procedure
36.31	Open chest transmyocardial revascularization	ICD-9-CM	Procedure
36.32	Other transmyocardial revascularization	ICD-9-CM	Procedure
36.33	Endoscopic transmyocardial revascularization	ICD-9-CM	Procedure
36.34	Percutaneous transmyocardial revascularization	ICD-9-CM	Procedure
36.39	Other heart revascularization	ICD-9-CM	Procedure
00566	Anesthesia for direct coronary artery bypass grafting; without pump oxygenator	CPT-4	Procedure
33508	Endoscopy, surgical, including video-assisted harvest of vein(s) for coronary artery bypass procedure (List separately in addition to code for primary procedure)	CPT-4	Procedure
33510	Coronary artery bypass, vein only; single coronary venous graft	CPT-4	Procedure
33511	Coronary artery bypass, vein only; 2 coronary venous grafts	CPT-4	Procedure
33512	Coronary artery bypass, vein only; 3 coronary venous grafts	CPT-4	Procedure
33513	Coronary artery bypass, vein only; 4 coronary venous grafts	CPT-4	Procedure
33514	Coronary artery bypass, vein only; 5 coronary venous grafts	CPT-4	Procedure
33516	Coronary artery bypass, vein only; 6 or more coronary venous grafts	CPT-4	Procedure
33517	Coronary artery bypass, using venous graft(s) and arterial graft(s); single vein graft (List separately in addition to code for primary procedure)	CPT-4	Procedure
33518	Coronary artery bypass, using venous graft(s) and arterial graft(s); 2 venous grafts (List separately in addition to code for primary procedure)	CPT-4	Procedure
33519	Coronary artery bypass, using venous graft(s) and arterial graft(s); 3 venous grafts (List separately in addition to code for primary procedure)	CPT-4	Procedure
33521	Coronary artery bypass, using venous graft(s) and arterial graft(s); 4 venous grafts (List separately in addition to code for primary procedure)	CPT-4	Procedure
33522	Coronary artery bypass, using venous graft(s) and arterial graft(s); 5 venous grafts (List separately in addition to code for primary procedure)	CPT-4	Procedure
33523	Coronary artery bypass, using venous graft(s) and arterial graft(s); 6 or more venous grafts (List separately in addition to code for primary procedure)	CPT-4	Procedure
33530	Reoperation, coronary artery bypass procedure or valve procedure, more than 1 month after original operation (List separately in addition to code for primary procedure)	CPT-4	Procedure
33533	Coronary artery bypass, using arterial graft(s); single arterial graft	CPT-4	Procedure
33534	Coronary artery bypass, using arterial graft(s); 2 coronary arterial grafts	CPT-4	Procedure
33535	Coronary artery bypass, using arterial graft(s); 3 coronary arterial grafts	CPT-4	Procedure
33536	Coronary artery bypass, using arterial graft(s); 4 or more coronary arterial grafts	CPT-4	Procedure

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Code	Description	Code Type	Code Category
33572	Coronary endarterectomy, open, any method, of left anterior descending, circumflex, or right coronary artery performed in conjunction with coronary artery bypass graft procedure, each vessel (List separately in addition to primary procedure)	CPT-4	Procedure
35500	Harvest of upper extremity vein, 1 segment, for lower extremity or coronary artery bypass procedure (List separately in addition to code for primary procedure)	CPT-4	Procedure
92920	Percutaneous transluminal coronary angioplasty; single major coronary artery or branch	CPT-4	Procedure
92921	Percutaneous transluminal coronary angioplasty; each additional branch of a major coronary artery (List separately in addition to code for primary procedure)	CPT-4	Procedure
92924	Percutaneous transluminal coronary atherectomy, with coronary angioplasty when performed; single major coronary artery or branch	CPT-4	Procedure
92925	Percutaneous transluminal coronary atherectomy, with coronary angioplasty when performed; each additional branch of a major coronary artery (List separately in addition to code for primary procedure)	CPT-4	Procedure
92928	Percutaneous transcatheter placement of intracoronary stent(s), with coronary angioplasty when performed; single major coronary artery or branch	CPT-4	Procedure
92929	Percutaneous transcatheter placement of intracoronary stent(s), with coronary angioplasty when performed; each additional branch of a major coronary artery (List separately in addition to code for primary procedure)	CPT-4	Procedure
92933	Percutaneous transluminal coronary atherectomy, with intracoronary stent, with coronary angioplasty when performed; single major coronary artery or branch	CPT-4	Procedure
92934	Percutaneous transluminal coronary atherectomy, with intracoronary stent, with coronary angioplasty when performed; each additional branch of a major coronary artery (List separately in addition to code for primary procedure)	CPT-4	Procedure
92937	Percutaneous transluminal revascularization of or through coronary artery bypass graft (internal mammary, free arterial, venous), any combination of intracoronary stent, atherectomy and angioplasty, including distal protection when performed; single vessel	CPT-4	Procedure
92938	Percutaneous transluminal revascularization of or through coronary artery bypass graft (internal mammary, free arterial, venous), any combination of intracoronary stent, atherectomy and angioplasty, including distal protection when performed; each additional branch subtended by the bypass graft (List separately in addition to code for primary procedure)	CPT-4	Procedure
92941	Percutaneous transluminal revascularization of acute total/subtotal occlusion during acute myocardial infarction, coronary artery or coronary artery bypass graft, any combination of intracoronary stent, atherectomy and angioplasty, including aspiration thrombectomy when performed, single vessel	CPT-4	Procedure

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Code	Description	Code Type	Code Category
92943	Percutaneous transluminal revascularization of chronic total occlusion, coronary artery, coronary artery branch, or coronary artery bypass graft, any combination of intracoronary stent, atherectomy and angioplasty; single vessel	CPT-4	Procedure
92944	Percutaneous transluminal revascularization of chronic total occlusion, coronary artery, coronary artery branch, or coronary artery bypass graft, any combination of intracoronary stent, atherectomy and angioplasty; each additional coronary artery, coronary artery branch, or bypass graft (List separately in addition to code for primary procedure)	CPT-4	Procedure
92973	Percutaneous transluminal coronary thrombectomy mechanical (List separately in addition to code for primary procedure)	CPT-4	Procedure
92975	Thrombolysis, coronary; by intracoronary infusion, including selective coronary angiography	CPT-4	Procedure
92977	Thrombolysis, coronary; by intravenous infusion	CPT-4	Procedure
92980	Transcatheter placement of an intracoronary stent(s), percutaneous, with or without other therapeutic intervention, any method; single vessel	CPT-4	Procedure
92981	Transcatheter placement of an intracoronary stent(s), percutaneous, with or without other therapeutic intervention, any method; each additional vessel (List separately in addition to code for primary procedure)	CPT-4	Procedure
92982	Percutaneous transluminal coronary balloon angioplasty; single vessel	CPT-4	Procedure
92984	Percutaneous transluminal coronary balloon angioplasty; each additional vessel (List separately in addition to code for primary procedure)	CPT-4	Procedure
92995	Percutaneous transluminal coronary atherectomy, by mechanical or other method, with or without balloon angioplasty; single vessel	CPT-4	Procedure
92996	Percutaneous transluminal coronary atherectomy, by mechanical or other method, with or without balloon angioplasty; each additional vessel (List separately in addition to code for primary procedure)	CPT-4	Procedure
93540	Injection procedure during cardiac catheterization; for selective opacification of aortocoronary venous bypass grafts, 1 or more coronary arteries	CPT-4	Procedure
93564	Injection procedure during cardiac catheterization including imaging supervision, interpretation, and report; for selective opacification of aortocoronary venous or arterial bypass graft(s) (eg, aortocoronary saphenous vein, free radial artery, or free mammary artery graft) to one or more coronary arteries and in situ arterial conduits (eg, internal mammary), whether native or used for bypass to one or more coronary arteries during congenital heart catheterization, when performed (List separately in addition to code for primary procedure)	CPT-4	Procedure
C9600	Percutaneous transcatheter placement of drug eluting intracoronary stent(s), with coronary angioplasty when performed; single major coronary artery or branch	HCPCS	Procedure
C9601	Percutaneous transcatheter placement of drug-eluting intracoronary stent(s), with coronary angioplasty when performed; each additional branch of a major coronary artery (list separately in addition to code for primary procedure)	HCPCS	Procedure

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Code	Description	Code Type	Code Category
C9602	Percutaneous transluminal coronary atherectomy, with drug eluting intracoronary stent, with coronary angioplasty when performed; single major coronary artery or branch	HCPCS	Procedure
C9603	Percutaneous transluminal coronary atherectomy, with drug-eluting intracoronary stent, with coronary angioplasty when performed; each additional branch of a major coronary artery (list separately in addition to code for primary procedure)	HCPCS	Procedure
C9604	Percutaneous transluminal revascularization of or through coronary artery bypass graft (internal mammary, free arterial, venous), any combination of drug-eluting intracoronary stent, atherectomy and angioplasty, including distal protection when performed; single vessel	HCPCS	Procedure
C9605	Percutaneous transluminal revascularization of or through coronary artery bypass graft (internal mammary, free arterial, venous), any combination of drug-eluting intracoronary stent, atherectomy and angioplasty, including distal protection when performed; each additional branch subtended by the bypass graft (list separately in addition to code for primary procedure)	HCPCS	Procedure
C9606	Percutaneous transluminal revascularization of acute total/subtotal occlusion during acute myocardial infarction, coronary artery or coronary artery bypass graft, any combination of drug-eluting intracoronary stent, atherectomy and angioplasty, including aspiration thrombectomy when performed, single vessel	HCPCS	Procedure
C9607	Percutaneous transluminal revascularization of chronic total occlusion, coronary artery, coronary artery branch, or coronary artery bypass graft, any combination of drug-eluting intracoronary stent, atherectomy and angioplasty; single vessel	HCPCS	Procedure
C9608	Percutaneous transluminal revascularization of chronic total occlusion, coronary artery, coronary artery branch, or coronary artery bypass graft, any combination of drug-eluting intracoronary stent, atherectomy and angioplasty; each additional coronary artery, coronary artery branch, or bypass graft (list separately in addition to code for primary procedure)	HCPCS	Procedure
G0290	Transcatheter placement of a drug eluting intracoronary stent(s), percutaneous, with or without other therapeutic intervention, any method; single vessel	HCPCS	Procedure
G0291	Transcatheter placement of a drug eluting intracoronary stent(s), percutaneous, with or without other therapeutic intervention, any method; each additional vessel	HCPCS	Procedure
G8158	Patient documented to have received coronary artery bypass graft with use of internal mammary artery	HCPCS	Procedure
G8159	Patient documented to have received coronary artery bypass graft without use of internal mammary artery	HCPCS	Procedure
G8161	Patient with isolated coronary artery bypass graft documented to have received pre-operative beta-blockade	HCPCS	Procedure
G8162	Patient with isolated coronary artery bypass graft not documented to have received preoperative beta-blockade	HCPCS	Procedure
G8163	Clinician documented that patient with isolated coronary artery bypass graft was not an eligible candidate for pre-operative beta-blockade measure	HCPCS	Procedure
G8164	Patient with isolated coronary artery bypass graft documented to have prolonged intubation	HCPCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
G8165	Patient with isolated coronary artery bypass graft not documented to have prolonged intubation	HCPCS	Procedure
G8166	Patient with isolated coronary artery bypass graft documented to have required surgical re-exploration	HCPCS	Procedure
G8167	Patient with isolated coronary artery bypass graft did not require surgical re-exploration	HCPCS	Procedure
G8170	Patient with isolated coronary artery bypass graft documented to have been discharged on aspirin or clopidogrel	HCPCS	Procedure
G8171	Patient with isolated coronary artery bypass graft not documented to have been discharged on aspirin or clopidogrel	HCPCS	Procedure
G8172	Clinician documented that patient with isolated coronary artery bypass graft was not an eligible candidate for antiplatelet therapy at discharge measure	HCPCS	Procedure
Z92.82	Status post administration of tPA (rtPA) in a different facility within the last 24 hours prior to admission to current facility	ICD-10-CM	Diagnosis
Z95.1	Presence of aortocoronary bypass graft	ICD-10-CM	Diagnosis
Z95.5	Presence of coronary angioplasty implant and graft	ICD-10-CM	Diagnosis
Z98.61	Coronary angioplasty status	ICD-10-CM	Diagnosis
00.66	Percutaneous transluminal coronary angioplasty [PTCA]	ICD-9-CM	Procedure
0210083	Bypass Coronary Artery, One Artery from Coronary Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0210088	Bypass Coronary Artery, One Artery from Right Internal Mammary with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0210089	Bypass Coronary Artery, One Artery from Left Internal Mammary with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021008C	Bypass Coronary Artery, One Artery from Thoracic Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021008F	Bypass Coronary Artery, One Artery from Abdominal Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021008W	Bypass Coronary Artery, One Artery from Aorta with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0210093	Bypass Coronary Artery, One Artery from Coronary Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
0210098	Bypass Coronary Artery, One Artery from Right Internal Mammary with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
0210099	Bypass Coronary Artery, One Artery from Left Internal Mammary with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021009C	Bypass Coronary Artery, One Artery from Thoracic Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021009F	Bypass Coronary Artery, One Artery from Abdominal Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021009W	Bypass Coronary Artery, One Artery from Aorta with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
02100A3	Bypass Coronary Artery, One Artery from Coronary Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02100A8	Bypass Coronary Artery, One Artery from Right Internal Mammary with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02100A9	Bypass Coronary Artery, One Artery from Left Internal Mammary with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02100AC	Bypass Coronary Artery, One Artery from Thoracic Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02100AF	Bypass Coronary Artery, One Artery from Abdominal Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02100AW	Bypass Coronary Artery, One Artery from Aorta with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02100J3	Bypass Coronary Artery, One Artery from Coronary Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02100J8	Bypass Coronary Artery, One Artery from Right Internal Mammary with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02100J9	Bypass Coronary Artery, One Artery from Left Internal Mammary with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02100JC	Bypass Coronary Artery, One Artery from Thoracic Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02100JF	Bypass Coronary Artery, One Artery from Abdominal Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02100JW	Bypass Coronary Artery, One Artery from Aorta with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02100K3	Bypass Coronary Artery, One Artery from Coronary Artery with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02100K8	Bypass Coronary Artery, One Artery from Right Internal Mammary with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02100K9	Bypass Coronary Artery, One Artery from Left Internal Mammary with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02100KC	Bypass Coronary Artery, One Artery from Thoracic Artery with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02100KF	Bypass Coronary Artery, One Artery from Abdominal Artery with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02100KW	Bypass Coronary Artery, One Artery from Aorta with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02100Z3	Bypass Coronary Artery, One Artery from Coronary Artery, Open Approach	ICD-10-PCS	Procedure
02100Z8	Bypass Coronary Artery, One Artery from Right Internal Mammary, Open Approach	ICD-10-PCS	Procedure
02100Z9	Bypass Coronary Artery, One Artery from Left Internal Mammary, Open Approach	ICD-10-PCS	Procedure
02100ZC	Bypass Coronary Artery, One Artery from Thoracic Artery, Open Approach	ICD-10-PCS	Procedure
02100ZF	Bypass Coronary Artery, One Artery from Abdominal Artery, Open Approach	ICD-10-PCS	Procedure
0210344	Bypass Coronary Artery, One Artery from Coronary Vein with Drug-eluting Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02103D4	Bypass Coronary Artery, One Artery from Coronary Vein with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
0210444	Bypass Coronary Artery, One Artery from Coronary Vein with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0210483	Bypass Coronary Artery, One Artery from Coronary Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0210488	Bypass Coronary Artery, One Artery from Right Internal Mammary with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0210489	Bypass Coronary Artery, One Artery from Left Internal Mammary with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021048C	Bypass Coronary Artery, One Artery from Thoracic Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
021048F	Bypass Coronary Artery, One Artery from Abdominal Artery with Zooplasic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021048W	Bypass Coronary Artery, One Artery from Aorta with Zooplasic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0210493	Bypass Coronary Artery, One Artery from Coronary Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0210498	Bypass Coronary Artery, One Artery from Right Internal Mammary with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0210499	Bypass Coronary Artery, One Artery from Left Internal Mammary with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021049C	Bypass Coronary Artery, One Artery from Thoracic Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021049F	Bypass Coronary Artery, One Artery from Abdominal Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021049W	Bypass Coronary Artery, One Artery from Aorta with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104A3	Bypass Coronary Artery, One Artery from Coronary Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104A8	Bypass Coronary Artery, One Artery from Right Internal Mammary with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104A9	Bypass Coronary Artery, One Artery from Left Internal Mammary with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104AC	Bypass Coronary Artery, One Artery from Thoracic Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104AF	Bypass Coronary Artery, One Artery from Abdominal Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104AW	Bypass Coronary Artery, One Artery from Aorta with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104D4	Bypass Coronary Artery, One Artery from Coronary Vein with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104J3	Bypass Coronary Artery, One Artery from Coronary Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104J8	Bypass Coronary Artery, One Artery from Right Internal Mammary with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104J9	Bypass Coronary Artery, One Artery from Left Internal Mammary with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104JC	Bypass Coronary Artery, One Artery from Thoracic Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104JF	Bypass Coronary Artery, One Artery from Abdominal Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104JW	Bypass Coronary Artery, One Artery from Aorta with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104K3	Bypass Coronary Artery, One Artery from Coronary Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104K8	Bypass Coronary Artery, One Artery from Right Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104K9	Bypass Coronary Artery, One Artery from Left Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
02104KC	Bypass Coronary Artery, One Artery from Thoracic Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104KF	Bypass Coronary Artery, One Artery from Abdominal Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104KW	Bypass Coronary Artery, One Artery from Aorta with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104Z3	Bypass Coronary Artery, One Artery from Coronary Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104Z8	Bypass Coronary Artery, One Artery from Right Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104Z9	Bypass Coronary Artery, One Artery from Left Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104ZC	Bypass Coronary Artery, One Artery from Thoracic Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104ZF	Bypass Coronary Artery, One Artery from Abdominal Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0211083	Bypass Coronary Artery, Two Arteries from Coronary Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0211088	Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0211089	Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021108C	Bypass Coronary Artery, Two Arteries from Thoracic Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021108F	Bypass Coronary Artery, Two Arteries from Abdominal Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021108W	Bypass Coronary Artery, Two Arteries from Aorta with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0211093	Bypass Coronary Artery, Two Arteries from Coronary Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
0211098	Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
0211099	Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021109C	Bypass Coronary Artery, Two Arteries from Thoracic Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021109F	Bypass Coronary Artery, Two Arteries from Abdominal Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021109W	Bypass Coronary Artery, Two Arteries from Aorta with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
02110A3	Bypass Coronary Artery, Two Arteries from Coronary Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02110A8	Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02110A9	Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02110AC	Bypass Coronary Artery, Two Arteries from Thoracic Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02110AF	Bypass Coronary Artery, Two Arteries from Abdominal Artery with Autologous Arterial Tissue. Open Approach	ICD-10-PCS	Procedure
02110AW	Bypass Coronary Artery, Two Arteries from Aorta with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02110J3	Bypass Coronary Artery, Two Arteries from Coronary Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02110J8	Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Synthetic Substitute. Open Approach	ICD-10-PCS	Procedure
02110J9	Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Synthetic Substitute. Open Approach	ICD-10-PCS	Procedure
02110JC	Bypass Coronary Artery, Two Arteries from Thoracic Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02110JF	Bypass Coronary Artery, Two Arteries from Abdominal Artery with Synthetic Substitute. Open Approach	ICD-10-PCS	Procedure
02110JW	Bypass Coronary Artery, Two Arteries from Aorta with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02110K3	Bypass Coronary Artery, Two Arteries from Coronary Artery with Nonautologous Tissue Substitute. Open Approach	ICD-10-PCS	Procedure
02110K8	Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Nonautologous Tissue Substitute. Open Approach	ICD-10-PCS	Procedure
02110K9	Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Nonautologous Tissue Substitute. Open Approach	ICD-10-PCS	Procedure
02110KC	Bypass Coronary Artery, Two Arteries from Thoracic Artery with Nonautologous Tissue Substitute. Open Approach	ICD-10-PCS	Procedure
02110KF	Bypass Coronary Artery, Two Arteries from Abdominal Artery with Nonautologous Tissue Substitute. Open Approach	ICD-10-PCS	Procedure
02110KW	Bypass Coronary Artery, Two Arteries from Aorta with Nonautologous Tissue Substitute. Open Approach	ICD-10-PCS	Procedure
02110Z3	Bypass Coronary Artery, Two Arteries from Coronary Artery, Open Approach	ICD-10-PCS	Procedure
02110Z8	Bypass Coronary Artery, Two Arteries from Right Internal Mammary, Open Approach	ICD-10-PCS	Procedure
02110Z9	Bypass Coronary Artery, Two Arteries from Left Internal Mammary, Open Approach	ICD-10-PCS	Procedure
02110ZC	Bypass Coronary Artery, Two Arteries from Thoracic Artery, Open Approach	ICD-10-PCS	Procedure
02110ZF	Bypass Coronary Artery, Two Arteries from Abdominal Artery, Open Approach	ICD-10-PCS	Procedure
0211344	Bypass Coronary Artery, Two Arteries from Coronary Vein with Drug-eluting Intraluminal Device. Percutaneous Approach	ICD-10-PCS	Procedure
02113D4	Bypass Coronary Artery, Two Arteries from Coronary Vein with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
0211444	Bypass Coronary Artery, Two Arteries from Coronary Vein with Drug-eluting Intraluminal Device. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0211483	Bypass Coronary Artery, Two Arteries from Coronary Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0211488	Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Zooplastic Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0211489	Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Zooplastic Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021148C	Bypass Coronary Artery, Two Arteries from Thoracic Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
021148F	Bypass Coronary Artery, Two Arteries from Abdominal Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021148W	Bypass Coronary Artery, Two Arteries from Aorta with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0211493	Bypass Coronary Artery, Two Arteries from Coronary Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0211498	Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0211499	Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021149C	Bypass Coronary Artery, Two Arteries from Thoracic Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021149F	Bypass Coronary Artery, Two Arteries from Abdominal Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021149W	Bypass Coronary Artery, Two Arteries from Aorta with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114A3	Bypass Coronary Artery, Two Arteries from Coronary Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114A8	Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114A9	Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114AC	Bypass Coronary Artery, Two Arteries from Thoracic Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114AF	Bypass Coronary Artery, Two Arteries from Abdominal Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114AW	Bypass Coronary Artery, Two Arteries from Aorta with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114D4	Bypass Coronary Artery, Two Arteries from Coronary Vein with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114J3	Bypass Coronary Artery, Two Arteries from Coronary Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114J8	Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114J9	Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114JC	Bypass Coronary Artery, Two Arteries from Thoracic Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114JF	Bypass Coronary Artery, Two Arteries from Abdominal Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114JW	Bypass Coronary Artery, Two Arteries from Aorta with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114K3	Bypass Coronary Artery, Two Arteries from Coronary Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114K8	Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114K9	Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
02114KC	Bypass Coronary Artery, Two Arteries from Thoracic Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114KF	Bypass Coronary Artery, Two Arteries from Abdominal Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114KW	Bypass Coronary Artery, Two Arteries from Aorta with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114Z3	Bypass Coronary Artery, Two Arteries from Coronary Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114Z8	Bypass Coronary Artery, Two Arteries from Right Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114Z9	Bypass Coronary Artery, Two Arteries from Left Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114ZC	Bypass Coronary Artery, Two Arteries from Thoracic Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114ZF	Bypass Coronary Artery, Two Arteries from Abdominal Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0212083	Bypass Coronary Artery, Three Arteries from Coronary Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0212088	Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0212089	Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021208C	Bypass Coronary Artery, Three Arteries from Thoracic Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021208F	Bypass Coronary Artery, Three Arteries from Abdominal Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021208W	Bypass Coronary Artery, Three Arteries from Aorta with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0212093	Bypass Coronary Artery, Three Arteries from Coronary Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
0212098	Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
0212099	Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021209C	Bypass Coronary Artery, Three Arteries from Thoracic Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021209F	Bypass Coronary Artery, Three Arteries from Abdominal Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021209W	Bypass Coronary Artery, Three Arteries from Aorta with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
02120A3	Bypass Coronary Artery, Three Arteries from Coronary Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02120A8	Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02120A9	Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02120AC	Bypass Coronary Artery, Three Arteries from Thoracic Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02120AF	Bypass Coronary Artery, Three Arteries from Abdominal Artery with Autologous Arterial Tissue. Open Approach	ICD-10-PCS	Procedure
02120AW	Bypass Coronary Artery, Three Arteries from Aorta with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02120J3	Bypass Coronary Artery, Three Arteries from Coronary Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02120J8	Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Synthetic Substitute. Open Approach	ICD-10-PCS	Procedure
02120J9	Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02120JC	Bypass Coronary Artery, Three Arteries from Thoracic Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02120JF	Bypass Coronary Artery, Three Arteries from Abdominal Artery with Synthetic Substitute. Open Approach	ICD-10-PCS	Procedure
02120JW	Bypass Coronary Artery, Three Arteries from Aorta with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02120K3	Bypass Coronary Artery, Three Arteries from Coronary Artery with Nonautologous Tissue Substitute. Open Approach	ICD-10-PCS	Procedure
02120K8	Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Nonautologous Tissue Substitute. Open Approach	ICD-10-PCS	Procedure
02120K9	Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Nonautologous Tissue Substitute. Open Approach	ICD-10-PCS	Procedure
02120KC	Bypass Coronary Artery, Three Arteries from Thoracic Artery with Nonautologous Tissue Substitute. Open Approach	ICD-10-PCS	Procedure
02120KF	Bypass Coronary Artery, Three Arteries from Abdominal Artery with Nonautologous Tissue Substitute. Open Approach	ICD-10-PCS	Procedure
02120KW	Bypass Coronary Artery, Three Arteries from Aorta with Nonautologous Tissue Substitute. Open Approach	ICD-10-PCS	Procedure
02120Z3	Bypass Coronary Artery, Three Arteries from Coronary Artery, Open Approach	ICD-10-PCS	Procedure
02120Z8	Bypass Coronary Artery, Three Arteries from Right Internal Mammary, Open Approach	ICD-10-PCS	Procedure
02120Z9	Bypass Coronary Artery, Three Arteries from Left Internal Mammary, Open Approach	ICD-10-PCS	Procedure
02120ZC	Bypass Coronary Artery, Three Arteries from Thoracic Artery, Open Approach	ICD-10-PCS	Procedure
02120ZF	Bypass Coronary Artery, Three Arteries from Abdominal Artery, Open Approach	ICD-10-PCS	Procedure
0212344	Bypass Coronary Artery, Three Arteries from Coronary Vein with Drug-eluting Intraluminal Device. Percutaneous Approach	ICD-10-PCS	Procedure
02123D4	Bypass Coronary Artery, Three Arteries from Coronary Vein with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
0212444	Bypass Coronary Artery, Three Arteries from Coronary Vein with Drug-eluting Intraluminal Device. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0212483	Bypass Coronary Artery, Three Arteries from Coronary Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0212488	Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Zooplastic Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0212489	Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Zooplastic Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021248C	Bypass Coronary Artery, Three Arteries from Thoracic Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
021248F	Bypass Coronary Artery, Three Arteries from Abdominal Artery with Zooplasic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021248W	Bypass Coronary Artery, Three Arteries from Aorta with Zooplasic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0212493	Bypass Coronary Artery, Three Arteries from Coronary Artery with Autologous Venous Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0212498	Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Autologous Venous Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0212499	Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Autologous Venous Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021249C	Bypass Coronary Artery, Three Arteries from Thoracic Artery with Autologous Venous Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021249F	Bypass Coronary Artery, Three Arteries from Abdominal Artery with Autologous Venous Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021249W	Bypass Coronary Artery, Three Arteries from Aorta with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124A3	Bypass Coronary Artery, Three Arteries from Coronary Artery with Autologous Arterial Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124A8	Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Autologous Arterial Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124A9	Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Autologous Arterial Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124AC	Bypass Coronary Artery, Three Arteries from Thoracic Artery with Autologous Arterial Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124AF	Bypass Coronary Artery, Three Arteries from Abdominal Artery with Autologous Arterial Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124AW	Bypass Coronary Artery, Three Arteries from Aorta with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124D4	Bypass Coronary Artery, Three Arteries from Coronary Vein with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124J3	Bypass Coronary Artery, Three Arteries from Coronary Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124J8	Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Synthetic Substitute. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124J9	Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Synthetic Substitute. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124JC	Bypass Coronary Artery, Three Arteries from Thoracic Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124JF	Bypass Coronary Artery, Three Arteries from Abdominal Artery with Synthetic Substitute. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124JW	Bypass Coronary Artery, Three Arteries from Aorta with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124K3	Bypass Coronary Artery, Three Arteries from Coronary Artery with Nonautologous Tissue Substitute. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124K8	Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Nonautologous Tissue Substitute. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124K9	Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Nonautologous Tissue Substitute. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
02124KC	Bypass Coronary Artery, Three Arteries from Thoracic Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124KF	Bypass Coronary Artery, Three Arteries from Abdominal Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124KW	Bypass Coronary Artery, Three Arteries from Aorta with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124Z3	Bypass Coronary Artery, Three Arteries from Coronary Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124Z8	Bypass Coronary Artery, Three Arteries from Right Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124Z9	Bypass Coronary Artery, Three Arteries from Left Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124ZC	Bypass Coronary Artery, Three Arteries from Thoracic Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124ZF	Bypass Coronary Artery, Three Arteries from Abdominal Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0213083	Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0213088	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0213089	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021308C	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021308F	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021308W	Bypass Coronary Artery, Four or More Arteries from Aorta with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0213093	Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
0213098	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
0213099	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021309C	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021309F	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021309W	Bypass Coronary Artery, Four or More Arteries from Aorta with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
02130A3	Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02130A8	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02130A9	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02130AC	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
02130AF	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Autologous Arterial Tissue. Open Approach	ICD-10-PCS	Procedure
02130AW	Bypass Coronary Artery, Four or More Arteries from Aorta with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02130J3	Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Synthetic Substitute. Open Approach	ICD-10-PCS	Procedure
02130J8	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Synthetic Substitute. Open Approach	ICD-10-PCS	Procedure
02130J9	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Synthetic Substitute. Open Approach	ICD-10-PCS	Procedure
02130JC	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Synthetic Substitute. Open Approach	ICD-10-PCS	Procedure
02130JF	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Synthetic Substitute. Open Approach	ICD-10-PCS	Procedure
02130JW	Bypass Coronary Artery, Four or More Arteries from Aorta with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02130K3	Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Nonautologous Tissue Substitute. Open Approach	ICD-10-PCS	Procedure
02130K8	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Nonautologous Tissue Substitute. Open Approach	ICD-10-PCS	Procedure
02130K9	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Nonautologous Tissue Substitute. Open Approach	ICD-10-PCS	Procedure
02130KC	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Nonautologous Tissue Substitute. Open Approach	ICD-10-PCS	Procedure
02130KF	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Nonautologous Tissue Substitute. Open Approach	ICD-10-PCS	Procedure
02130KW	Bypass Coronary Artery, Four or More Arteries from Aorta with Nonautologous Tissue Substitute. Open Approach	ICD-10-PCS	Procedure
02130Z3	Bypass Coronary Artery, Four or More Arteries from Coronary Artery, Open Approach	ICD-10-PCS	Procedure
02130Z8	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary, Open Approach	ICD-10-PCS	Procedure
02130Z9	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary, Open Approach	ICD-10-PCS	Procedure
02130ZC	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery, Open Approach	ICD-10-PCS	Procedure
02130ZF	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery, Open Approach	ICD-10-PCS	Procedure
0213344	Bypass Coronary Artery, Four or More Arteries from Coronary Vein with Drug-eluting Intraluminal Device. Percutaneous Approach	ICD-10-PCS	Procedure
02133D4	Bypass Coronary Artery, Four or More Arteries from Coronary Vein with Intraluminal Device. Percutaneous Approach	ICD-10-PCS	Procedure
0213444	Bypass Coronary Artery, Four or More Arteries from Coronary Vein with Drug-eluting Intraluminal Device. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0213483	Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Zooplastic Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0213488	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Zooplastic Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
0213489	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Zooplastic Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021348C	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Zooplastic Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021348F	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Zooplastic Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021348W	Bypass Coronary Artery, Four or More Arteries from Aorta with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0213493	Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Autologous Venous Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0213498	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Autologous Venous Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0213499	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Autologous Venous Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021349C	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Autologous Venous Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021349F	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Autologous Venous Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021349W	Bypass Coronary Artery, Four or More Arteries from Aorta with Autologous Venous Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134A3	Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Autologous Arterial Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134A8	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Autologous Arterial Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134A9	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Autologous Arterial Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134AC	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Autologous Arterial Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134AF	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Autologous Arterial Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134AW	Bypass Coronary Artery, Four or More Arteries from Aorta with Autologous Arterial Tissue. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134D4	Bypass Coronary Artery, Four or More Arteries from Coronary Vein with Intraluminal Device. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134J3	Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Synthetic Substitute. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134J8	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Synthetic Substitute. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134J9	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Synthetic Substitute. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134JC	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Synthetic Substitute. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134JF	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Synthetic Substitute. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134JW	Bypass Coronary Artery, Four or More Arteries from Aorta with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134K3	Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Nonautologous Tissue Substitute. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
02134K8	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134K9	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134KC	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134KF	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134KW	Bypass Coronary Artery, Four or More Arteries from Aorta with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134Z3	Bypass Coronary Artery, Four or More Arteries from Coronary Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134Z8	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134Z9	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134ZC	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134ZF	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021K0Z5	Bypass Right Ventricle to Coronary Circulation, Open Approach	ICD-10-PCS	Procedure
021K0Z8	Bypass Right Ventricle to Right Internal Mammary, Open Approach	ICD-10-PCS	Procedure
021K0Z9	Bypass Right Ventricle to Left Internal Mammary, Open Approach	ICD-10-PCS	Procedure
021K0ZC	Bypass Right Ventricle to Thoracic Artery, Open Approach	ICD-10-PCS	Procedure
021K0ZF	Bypass Right Ventricle to Abdominal Artery, Open Approach	ICD-10-PCS	Procedure
021K0ZW	Bypass Right Ventricle to Aorta, Open Approach	ICD-10-PCS	Procedure
021K4Z5	Bypass Right Ventricle to Coronary Circulation, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021K4Z8	Bypass Right Ventricle to Right Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021K4Z9	Bypass Right Ventricle to Left Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021K4ZC	Bypass Right Ventricle to Thoracic Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021K4ZF	Bypass Right Ventricle to Abdominal Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021K4ZW	Bypass Right Ventricle to Aorta, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L08P	Bypass Left Ventricle to Pulmonary Trunk with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021L08Q	Bypass Left Ventricle to Right Pulmonary Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021L08R	Bypass Left Ventricle to Left Pulmonary Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021L09P	Bypass Left Ventricle to Pulmonary Trunk with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021L09Q	Bypass Left Ventricle to Right Pulmonary Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021L09R	Bypass Left Ventricle to Left Pulmonary Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021L0AP	Bypass Left Ventricle to Pulmonary Trunk with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
021LOAQ	Bypass Left Ventricle to Right Pulmonary Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
021LOAR	Bypass Left Ventricle to Left Pulmonary Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
021LOJP	Bypass Left Ventricle to Pulmonary Trunk with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
021LOJQ	Bypass Left Ventricle to Right Pulmonary Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
021LOJR	Bypass Left Ventricle to Left Pulmonary Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
021LOKP	Bypass Left Ventricle to Pulmonary Trunk with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
021LOKQ	Bypass Left Ventricle to Right Pulmonary Artery with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
021LOKR	Bypass Left Ventricle to Left Pulmonary Artery with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
021LOZ5	Bypass Left Ventricle to Coronary Circulation, Open Approach	ICD-10-PCS	Procedure
021LOZ8	Bypass Left Ventricle to Right Internal Mammary, Open Approach	ICD-10-PCS	Procedure
021LOZ9	Bypass Left Ventricle to Left Internal Mammary, Open Approach	ICD-10-PCS	Procedure
021LOZC	Bypass Left Ventricle to Thoracic Artery, Open Approach	ICD-10-PCS	Procedure
021LOZF	Bypass Left Ventricle to Abdominal Artery, Open Approach	ICD-10-PCS	Procedure
021LOZP	Bypass Left Ventricle to Pulmonary Trunk, Open Approach	ICD-10-PCS	Procedure
021LOZQ	Bypass Left Ventricle to Right Pulmonary Artery, Open Approach	ICD-10-PCS	Procedure
021LOZR	Bypass Left Ventricle to Left Pulmonary Artery, Open Approach	ICD-10-PCS	Procedure
021L48P	Bypass Left Ventricle to Pulmonary Trunk with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L48Q	Bypass Left Ventricle to Right Pulmonary Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L48R	Bypass Left Ventricle to Left Pulmonary Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L49P	Bypass Left Ventricle to Pulmonary Trunk with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L49Q	Bypass Left Ventricle to Right Pulmonary Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L49R	Bypass Left Ventricle to Left Pulmonary Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4AP	Bypass Left Ventricle to Pulmonary Trunk with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4AQ	Bypass Left Ventricle to Right Pulmonary Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4AR	Bypass Left Ventricle to Left Pulmonary Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4JP	Bypass Left Ventricle to Pulmonary Trunk with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4JQ	Bypass Left Ventricle to Right Pulmonary Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4JR	Bypass Left Ventricle to Left Pulmonary Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4KP	Bypass Left Ventricle to Pulmonary Trunk with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
021L4KQ	Bypass Left Ventricle to Right Pulmonary Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4KR	Bypass Left Ventricle to Left Pulmonary Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4Z5	Bypass Left Ventricle to Coronary Circulation, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4Z8	Bypass Left Ventricle to Right Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4Z9	Bypass Left Ventricle to Left Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4ZC	Bypass Left Ventricle to Thoracic Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4ZF	Bypass Left Ventricle to Abdominal Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4ZP	Bypass Left Ventricle to Pulmonary Trunk, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4ZQ	Bypass Left Ventricle to Right Pulmonary Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4ZR	Bypass Left Ventricle to Left Pulmonary Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0270046	Dilation of Coronary Artery, One Artery, Bifurcation, with Drug-eluting Intraluminal Device. Open Approach	ICD-10-PCS	Procedure
027004Z	Dilation of Coronary Artery, One Artery with Drug-eluting Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
0270056	Dilation of Coronary Artery, One Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices. Open Approach	ICD-10-PCS	Procedure
027005Z	Dilation of Coronary Artery, One Artery with Two Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
0270066	Dilation of Coronary Artery, One Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices. Open Approach	ICD-10-PCS	Procedure
027006Z	Dilation of Coronary Artery, One Artery with Three Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
0270076	Dilation of Coronary Artery, One Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
027007Z	Dilation of Coronary Artery, One Artery with Four or More Drug-eluting Intraluminal Devices. Open Approach	ICD-10-PCS	Procedure
02700D6	Dilation of Coronary Artery, One Artery, Bifurcation, with Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02700DZ	Dilation of Coronary Artery, One Artery with Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02700E6	Dilation of Coronary Artery, One Artery, Bifurcation, with Two Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02700EZ	Dilation of Coronary Artery, One Artery with Two Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02700F6	Dilation of Coronary Artery, One Artery, Bifurcation, with Three Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02700FZ	Dilation of Coronary Artery, One Artery with Three Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02700G6	Dilation of Coronary Artery, One Artery, Bifurcation, with Four or More Intraluminal Devices. Open Approach	ICD-10-PCS	Procedure
02700GZ	Dilation of Coronary Artery, One Artery with Four or More Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02700T6	Dilation of Coronary Artery, One Artery, Bifurcation, with Radioactive Intraluminal Device. Open Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02700TZ	Dilation of Coronary Artery, One Artery with Radioactive Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02700Z6	Dilation of Coronary Artery, One Artery, Bifurcation, Open Approach	ICD-10-PCS	Procedure
02700ZZ	Dilation of Coronary Artery, One Artery, Open Approach	ICD-10-PCS	Procedure
0270346	Dilation of Coronary Artery, One Artery, Bifurcation, with Drug-eluting Intraluminal Device. Percutaneous Approach	ICD-10-PCS	Procedure
027034Z	Dilation of Coronary Artery, One Artery with Drug-eluting Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
0270356	Dilation of Coronary Artery, One Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
027035Z	Dilation of Coronary Artery, One Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
0270366	Dilation of Coronary Artery, One Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices. Percutaneous Approach	ICD-10-PCS	Procedure
027036Z	Dilation of Coronary Artery, One Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
0270376	Dilation of Coronary Artery, One Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices. Percutaneous Approach	ICD-10-PCS	Procedure
027037Z	Dilation of Coronary Artery, One Artery with Four or More Drug-eluting Intraluminal Devices. Percutaneous Approach	ICD-10-PCS	Procedure
02703D6	Dilation of Coronary Artery, One Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02703DZ	Dilation of Coronary Artery, One Artery with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02703E6	Dilation of Coronary Artery, One Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02703EZ	Dilation of Coronary Artery, One Artery with Two Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02703F6	Dilation of Coronary Artery, One Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02703FZ	Dilation of Coronary Artery, One Artery with Three Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02703G6	Dilation of Coronary Artery, One Artery, Bifurcation, with Four or More Intraluminal Devices. Percutaneous Approach	ICD-10-PCS	Procedure
02703GZ	Dilation of Coronary Artery, One Artery with Four or More Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02703T6	Dilation of Coronary Artery, One Artery, Bifurcation, with Radioactive Intraluminal Device. Percutaneous Approach	ICD-10-PCS	Procedure
02703TZ	Dilation of Coronary Artery, One Artery with Radioactive Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02703Z6	Dilation of Coronary Artery, One Artery, Bifurcation, Percutaneous Approach	ICD-10-PCS	Procedure
02703ZZ	Dilation of Coronary Artery, One Artery, Percutaneous Approach	ICD-10-PCS	Procedure
0270446	Dilation of Coronary Artery, One Artery, Bifurcation, with Drug-eluting Intraluminal Device. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027044Z	Dilation of Coronary Artery, One Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0270456	Dilation of Coronary Artery, One Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices. Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
027045Z	Dilation of Coronary Artery, One Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0270466	Dilation of Coronary Artery, One Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027046Z	Dilation of Coronary Artery, One Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0270476	Dilation of Coronary Artery, One Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027047Z	Dilation of Coronary Artery, One Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704D6	Dilation of Coronary Artery, One Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704DZ	Dilation of Coronary Artery, One Artery with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704E6	Dilation of Coronary Artery, One Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704EZ	Dilation of Coronary Artery, One Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704F6	Dilation of Coronary Artery, One Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704FZ	Dilation of Coronary Artery, One Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704G6	Dilation of Coronary Artery, One Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704GZ	Dilation of Coronary Artery, One Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704T6	Dilation of Coronary Artery, One Artery, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704TZ	Dilation of Coronary Artery, One Artery with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704Z6	Dilation of Coronary Artery, One Artery, Bifurcation, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704ZZ	Dilation of Coronary Artery, One Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0271046	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
027104Z	Dilation of Coronary Artery, Two Arteries with Drug-eluting Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
0271056	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
027105Z	Dilation of Coronary Artery, Two Arteries with Two Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
0271066	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
027106Z	Dilation of Coronary Artery, Two Arteries with Three Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
0271076	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
027107Z	Dilation of Coronary Artery, Two Arteries with Four or More Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02710D6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02710DZ	Dilation of Coronary Artery, Two Arteries with Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02710E6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Two Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02710EZ	Dilation of Coronary Artery, Two Arteries with Two Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02710F6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Three Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02710FZ	Dilation of Coronary Artery, Two Arteries with Three Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02710G6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Four or More Intraluminal Devices. Open Approach	ICD-10-PCS	Procedure
02710GZ	Dilation of Coronary Artery, Two Arteries with Four or More Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02710T6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Radioactive Intraluminal Device. Open Approach	ICD-10-PCS	Procedure
02710TZ	Dilation of Coronary Artery, Two Arteries with Radioactive Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02710Z6	Dilation of Coronary Artery, Two Arteries, Bifurcation, Open Approach	ICD-10-PCS	Procedure
02710ZZ	Dilation of Coronary Artery, Two Arteries, Open Approach	ICD-10-PCS	Procedure
0271346	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Drug-eluting Intraluminal Device. Percutaneous Approach	ICD-10-PCS	Procedure
027134Z	Dilation of Coronary Artery, Two Arteries with Drug-eluting Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
0271356	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices. Percutaneous Approach	ICD-10-PCS	Procedure
027135Z	Dilation of Coronary Artery, Two Arteries with Two Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
0271366	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices. Percutaneous Approach	ICD-10-PCS	Procedure
027136Z	Dilation of Coronary Artery, Two Arteries with Three Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
0271376	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
027137Z	Dilation of Coronary Artery, Two Arteries with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02713D6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02713DZ	Dilation of Coronary Artery, Two Arteries with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02713E6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02713EZ	Dilation of Coronary Artery, Two Arteries with Two Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02713F6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02713FZ	Dilation of Coronary Artery, Two Arteries with Three Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
02713G6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02713GZ	Dilation of Coronary Artery, Two Arteries with Four or More Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02713T6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02713TZ	Dilation of Coronary Artery, Two Arteries with Radioactive Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02713Z6	Dilation of Coronary Artery, Two Arteries, Bifurcation, Percutaneous Approach	ICD-10-PCS	Procedure
02713ZZ	Dilation of Coronary Artery, Two Arteries, Percutaneous Approach	ICD-10-PCS	Procedure
0271446	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027144Z	Dilation of Coronary Artery, Two Arteries with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0271456	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027145Z	Dilation of Coronary Artery, Two Arteries with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0271466	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027146Z	Dilation of Coronary Artery, Two Arteries with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0271476	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027147Z	Dilation of Coronary Artery, Two Arteries with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714D6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714DZ	Dilation of Coronary Artery, Two Arteries with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714E6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714EZ	Dilation of Coronary Artery, Two Arteries with Two Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714F6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714FZ	Dilation of Coronary Artery, Two Arteries with Three Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714G6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714GZ	Dilation of Coronary Artery, Two Arteries with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714T6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714TZ	Dilation of Coronary Artery, Two Arteries with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714Z6	Dilation of Coronary Artery, Two Arteries, Bifurcation, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714ZZ	Dilation of Coronary Artery, Two Arteries, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
0272046	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Drug-eluting Intraluminal Device. Open Approach	ICD-10-PCS	Procedure
027204Z	Dilation of Coronary Artery, Three Arteries with Drug-eluting Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
0272056	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices. Open Approach	ICD-10-PCS	Procedure
027205Z	Dilation of Coronary Artery, Three Arteries with Two Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
0272066	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
027206Z	Dilation of Coronary Artery, Three Arteries with Three Drug-eluting Intraluminal Devices. Open Approach	ICD-10-PCS	Procedure
0272076	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices. Open Approach	ICD-10-PCS	Procedure
027207Z	Dilation of Coronary Artery, Three Arteries with Four or More Drug-eluting Intraluminal Devices. Open Approach	ICD-10-PCS	Procedure
02720D6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02720DZ	Dilation of Coronary Artery, Three Arteries with Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02720E6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Two Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02720EZ	Dilation of Coronary Artery, Three Arteries with Two Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02720F6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Three Intraluminal Devices. Open Approach	ICD-10-PCS	Procedure
02720FZ	Dilation of Coronary Artery, Three Arteries with Three Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02720G6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Four or More Intraluminal Devices. Open Approach	ICD-10-PCS	Procedure
02720GZ	Dilation of Coronary Artery, Three Arteries with Four or More Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02720T6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Radioactive Intraluminal Device. Open Approach	ICD-10-PCS	Procedure
02720TZ	Dilation of Coronary Artery, Three Arteries with Radioactive Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02720Z6	Dilation of Coronary Artery, Three Arteries, Bifurcation, Open Approach	ICD-10-PCS	Procedure
02720ZZ	Dilation of Coronary Artery, Three Arteries, Open Approach	ICD-10-PCS	Procedure
0272346	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Drug-eluting Intraluminal Device. Percutaneous Approach	ICD-10-PCS	Procedure
027234Z	Dilation of Coronary Artery, Three Arteries with Drug-eluting Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
0272356	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices. Percutaneous Approach	ICD-10-PCS	Procedure
027235Z	Dilation of Coronary Artery, Three Arteries with Two Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
0272366	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices. Percutaneous Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
027236Z	Dilation of Coronary Artery, Three Arteries with Three Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
0272376	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
027237Z	Dilation of Coronary Artery, Three Arteries with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02723D6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02723DZ	Dilation of Coronary Artery, Three Arteries with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02723E6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02723EZ	Dilation of Coronary Artery, Three Arteries with Two Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02723F6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02723FZ	Dilation of Coronary Artery, Three Arteries with Three Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02723G6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02723GZ	Dilation of Coronary Artery, Three Arteries with Four or More Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02723T6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02723TZ	Dilation of Coronary Artery, Three Arteries with Radioactive Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02723Z6	Dilation of Coronary Artery, Three Arteries, Bifurcation, Percutaneous Approach	ICD-10-PCS	Procedure
02723ZZ	Dilation of Coronary Artery, Three Arteries, Percutaneous Approach	ICD-10-PCS	Procedure
0272446	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027244Z	Dilation of Coronary Artery, Three Arteries with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0272456	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027245Z	Dilation of Coronary Artery, Three Arteries with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0272466	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027246Z	Dilation of Coronary Artery, Three Arteries with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0272476	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027247Z	Dilation of Coronary Artery, Three Arteries with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724D6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724DZ	Dilation of Coronary Artery, Three Arteries with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
02724E6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724EZ	Dilation of Coronary Artery, Three Arteries with Two Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724F6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724FZ	Dilation of Coronary Artery, Three Arteries with Three Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724G6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724GZ	Dilation of Coronary Artery, Three Arteries with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724T6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724TZ	Dilation of Coronary Artery, Three Arteries with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724Z6	Dilation of Coronary Artery, Three Arteries, Bifurcation, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724ZZ	Dilation of Coronary Artery, Three Arteries, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0273046	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
027304Z	Dilation of Coronary Artery, Four or More Arteries with Drug-eluting Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
0273056	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
027305Z	Dilation of Coronary Artery, Four or More Arteries with Two Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
0273066	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
027306Z	Dilation of Coronary Artery, Four or More Arteries with Three Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
0273076	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
027307Z	Dilation of Coronary Artery, Four or More Arteries with Four or More Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02730D6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02730DZ	Dilation of Coronary Artery, Four or More Arteries with Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02730E6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Two Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02730EZ	Dilation of Coronary Artery, Four or More Arteries with Two Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02730F6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Three Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02730FZ	Dilation of Coronary Artery, Four or More Arteries with Three Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02730G6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Four or More Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02730GZ	Dilation of Coronary Artery, Four or More Arteries with Four or More Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02730T6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Radioactive Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02730TZ	Dilation of Coronary Artery, Four or More Arteries with Radioactive Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02730Z6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, Open Approach	ICD-10-PCS	Procedure
02730ZZ	Dilation of Coronary Artery, Four or More Arteries, Open Approach	ICD-10-PCS	Procedure
0273346	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
027334Z	Dilation of Coronary Artery, Four or More Arteries with Drug-eluting Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
0273356	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
027335Z	Dilation of Coronary Artery, Four or More Arteries with Two Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
0273366	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
027336Z	Dilation of Coronary Artery, Four or More Arteries with Three Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
0273376	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
027337Z	Dilation of Coronary Artery, Four or More Arteries with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02733D6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02733DZ	Dilation of Coronary Artery, Four or More Arteries with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02733E6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02733EZ	Dilation of Coronary Artery, Four or More Arteries with Two Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02733F6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02733FZ	Dilation of Coronary Artery, Four or More Arteries with Three Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02733G6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02733GZ	Dilation of Coronary Artery, Four or More Arteries with Four or More Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02733T6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02733TZ	Dilation of Coronary Artery, Four or More Arteries with Radioactive Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02733Z6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, Percutaneous Approach	ICD-10-PCS	Procedure
02733ZZ	Dilation of Coronary Artery, Four or More Arteries, Percutaneous Approach	ICD-10-PCS	Procedure
0273446	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
027344Z	Dilation of Coronary Artery, Four or More Arteries with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0273456	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027345Z	Dilation of Coronary Artery, Four or More Arteries with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0273466	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027346Z	Dilation of Coronary Artery, Four or More Arteries with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0273476	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027347Z	Dilation of Coronary Artery, Four or More Arteries with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734D6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734DZ	Dilation of Coronary Artery, Four or More Arteries with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734E6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734EZ	Dilation of Coronary Artery, Four or More Arteries with Two Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734F6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734FZ	Dilation of Coronary Artery, Four or More Arteries with Three Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734G6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734GZ	Dilation of Coronary Artery, Four or More Arteries with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734T6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734TZ	Dilation of Coronary Artery, Four or More Arteries with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734Z6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734ZZ	Dilation of Coronary Artery, Four or More Arteries, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02C00Z6	Extirpation of Matter from Coronary Artery, One Artery, Bifurcation, Open Approach	ICD-10-PCS	Procedure
02C00ZZ	Extirpation of Matter from Coronary Artery, One Artery, Open Approach	ICD-10-PCS	Procedure
02C03Z6	Extirpation of Matter from Coronary Artery, One Artery, Bifurcation, Percutaneous Approach	ICD-10-PCS	Procedure
02C03ZZ	Extirpation of Matter from Coronary Artery, One Artery, Percutaneous Approach	ICD-10-PCS	Procedure
02C04Z6	Extirpation of Matter from Coronary Artery, One Artery, Bifurcation, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02C04ZZ	Extirpation of Matter from Coronary Artery, One Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02C10Z6	Extirpation of Matter from Coronary Artery, Two Arteries, Bifurcation, Open Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
02C10ZZ	Extirpation of Matter from Coronary Artery, Two Arteries, Open Approach	ICD-10-PCS	Procedure
02C13Z6	Extirpation of Matter from Coronary Artery, Two Arteries, Bifurcation, Percutaneous Approach	ICD-10-PCS	Procedure
02C13ZZ	Extirpation of Matter from Coronary Artery, Two Arteries, Percutaneous Approach	ICD-10-PCS	Procedure
02C14Z6	Extirpation of Matter from Coronary Artery, Two Arteries, Bifurcation, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02C14ZZ	Extirpation of Matter from Coronary Artery, Two Arteries, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02C20Z6	Extirpation of Matter from Coronary Artery, Three Arteries, Bifurcation, Open Approach	ICD-10-PCS	Procedure
02C20ZZ	Extirpation of Matter from Coronary Artery, Three Arteries, Open Approach	ICD-10-PCS	Procedure
02C23Z6	Extirpation of Matter from Coronary Artery, Three Arteries, Bifurcation, Percutaneous Approach	ICD-10-PCS	Procedure
02C23ZZ	Extirpation of Matter from Coronary Artery, Three Arteries, Percutaneous Approach	ICD-10-PCS	Procedure
02C24Z6	Extirpation of Matter from Coronary Artery, Three Arteries, Bifurcation, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02C24ZZ	Extirpation of Matter from Coronary Artery, Three Arteries, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02C30Z6	Extirpation of Matter from Coronary Artery, Four or More Arteries, Bifurcation, Open Approach	ICD-10-PCS	Procedure
02C30ZZ	Extirpation of Matter from Coronary Artery, Four or More Arteries, Open Approach	ICD-10-PCS	Procedure
02C33Z6	Extirpation of Matter from Coronary Artery, Four or More Arteries, Bifurcation, Percutaneous Approach	ICD-10-PCS	Procedure
02C33ZZ	Extirpation of Matter from Coronary Artery, Four or More Arteries, Percutaneous Approach	ICD-10-PCS	Procedure
02C34Z6	Extirpation of Matter from Coronary Artery, Four or More Arteries, Bifurcation, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02C34ZZ	Extirpation of Matter from Coronary Artery, Four or More Arteries, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02QA0ZZ	Repair Heart, Open Approach	ICD-10-PCS	Procedure
02QA3ZZ	Repair Heart, Percutaneous Approach	ICD-10-PCS	Procedure
02QA4ZZ	Repair Heart, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02QB0ZZ	Repair Right Heart, Open Approach	ICD-10-PCS	Procedure
02QB3ZZ	Repair Right Heart, Percutaneous Approach	ICD-10-PCS	Procedure
02QB4ZZ	Repair Right Heart, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02QC0ZZ	Repair Left Heart, Open Approach	ICD-10-PCS	Procedure
02QC3ZZ	Repair Left Heart, Percutaneous Approach	ICD-10-PCS	Procedure
02QC4ZZ	Repair Left Heart, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
3E07017	Introduction of Other Thrombolytic into Coronary Artery, Open Approach	ICD-10-PCS	Procedure
3E070PZ	Introduction of Platelet Inhibitor into Coronary Artery, Open Approach	ICD-10-PCS	Procedure
3E07317	Introduction of Other Thrombolytic into Coronary Artery, Percutaneous Approach	ICD-10-PCS	Procedure
3E073PZ	Introduction of Platelet Inhibitor into Coronary Artery, Percutaneous Approach	ICD-10-PCS	Procedure
00567	Anesthesia for direct coronary artery bypass grafting; with pump oxygenator	CPT-4	Procedure
35600	Harvest of upper extremity artery, 1 segment, for coronary artery bypass procedure (List separately in addition to code for primary procedure)	CPT-4	Procedure

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Code	Description	Code Type	Code Category
93455	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with catheter placement(s) in bypass graft(s) (internal mammary, free arterial, venous grafts) including intraprocedural injection(s) for bypass graft angiography	CPT-4	Procedure
93457	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with catheter placement(s) in bypass graft(s) (internal mammary, free arterial, venous grafts) including intraprocedural injection(s) for bypass graft angiography and right heart catheterization	CPT-4	Procedure
93459	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with left heart catheterization including intraprocedural injection(s) for left ventriculography, when performed, catheter placement(s) in bypass graft(s) (internal mammary, free arterial, venous grafts) with bypass graft angiography	CPT-4	Procedure
93461	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with right and left heart catheterization including intraprocedural injection(s) for left ventriculography, when performed, catheter placement(s) in bypass graft(s) (internal mammary, free arterial, venous grafts) with bypass graft angiography	CPT-4	Procedure
93508	Catheter placement in coronary artery(s), arterial coronary conduit(s), and/or venous coronary bypass graft(s) for coronary angiography without concomitant left heart catheterization	CPT-4	Procedure
93556	Imaging supervision, interpretation and report for injection procedure(s) during cardiac catheterization; pulmonary angiography, aortography, and/or selective coronary angiography including venous bypass grafts and arterial conduits (whether native or used in bypass)	CPT-4	Procedure
Diabetes			
250	Diabetes mellitus	ICD-9-CM	Diagnosis
250.0	Diabetes mellitus without mention of complication	ICD-9-CM	Diagnosis
250.00	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.01	Diabetes mellitus without mention of complication, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.02	Diabetes mellitus without mention of complication, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.03	Diabetes mellitus without mention of complication, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.1	Diabetes with ketoacidosis	ICD-9-CM	Diagnosis
250.10	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.11	Diabetes with ketoacidosis, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.12	Diabetes with ketoacidosis, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
250.13	Diabetes with ketoacidosis, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.2	Diabetes with hyperosmolarity	ICD-9-CM	Diagnosis
250.20	Diabetes with hyperosmolarity, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.21	Diabetes with hyperosmolarity, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.22	Diabetes with hyperosmolarity, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.23	Diabetes with hyperosmolarity, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.3	Diabetes with other coma	ICD-9-CM	Diagnosis
250.30	Diabetes with other coma, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.31	Diabetes with other coma, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.32	Diabetes with other coma, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.33	Diabetes with other coma, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.4	Diabetes with renal manifestations	ICD-9-CM	Diagnosis
250.40	Diabetes with renal manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.41	Diabetes with renal manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.42	Diabetes with renal manifestations, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.43	Diabetes with renal manifestations, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.5	Diabetes with ophthalmic manifestations	ICD-9-CM	Diagnosis
250.50	Diabetes with ophthalmic manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.51	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.52	Diabetes with ophthalmic manifestations, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.53	Diabetes with ophthalmic manifestations, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.6	Diabetes with neurological manifestations	ICD-9-CM	Diagnosis
250.60	Diabetes with neurological manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.61	Diabetes with neurological manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.62	Diabetes with neurological manifestations, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.63	Diabetes with neurological manifestations, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.7	Diabetes with peripheral circulatory disorders	ICD-9-CM	Diagnosis
250.70	Diabetes with peripheral circulatory disorders, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.71	Diabetes with peripheral circulatory disorders, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.72	Diabetes with peripheral circulatory disorders, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.73	Diabetes with peripheral circulatory disorders, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.8	Diabetes with other specified manifestations	ICD-9-CM	Diagnosis
250.80	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.81	Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.82	Diabetes with other specified manifestations, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.83	Diabetes with other specified manifestations, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.9	Diabetes with unspecified complication	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
250.90	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.91	Diabetes with unspecified complication, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.92	Diabetes with unspecified complication, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.93	Diabetes with unspecified complication, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
A5500	For diabetics only, fitting (including follow-up), custom preparation and supply of off-the-shelf depth-inlay shoe manufactured to accommodate multidensity insert(s), per shoe	HCPCS	Procedure
A5501	For diabetics only, fitting (including follow-up), custom preparation and supply of shoe molded from cast(s) of patient's foot (custom molded shoe), per shoe	HCPCS	Procedure
A5503	For diabetics only, modification (including fitting) of off-the-shelf depth-inlay shoe or custom molded shoe with roller or rigid rocker bottom, per shoe	HCPCS	Procedure
A5504	For diabetics only, modification (including fitting) of off-the-shelf depth-inlay shoe or custom molded shoe with wedge(s), per shoe	HCPCS	Procedure
A5505	For diabetics only, modification (including fitting) of off-the-shelf depth-inlay shoe or custom molded shoe with metatarsal bar, per shoe	HCPCS	Procedure
A5506	For diabetics only, modification (including fitting) of off-the-shelf depth-inlay shoe or custom molded shoe with off-set heel(s), per shoe	HCPCS	Procedure
A5507	For diabetics only, not otherwise specified modification (including fitting) of off-the-shelf depth-inlay shoe or custom molded shoe, per shoe	HCPCS	Procedure
A5508	For diabetics only, deluxe feature of off-the-shelf depth-inlay shoe or custom molded shoe, per shoe	HCPCS	Procedure
A5510	For diabetics only, direct formed, compression molded to patient's foot without external heat source, multiple-density insert(s) prefabricated, per shoe	HCPCS	Procedure
A5512	For diabetics only, multiple density insert, direct formed, molded to foot after external heat source of 230 degrees Fahrenheit or higher, total contact with patient's foot, including arch, base layer minimum of 1/4 inch material of Shore A 35 durometer or 3/16 inch material of Shore A 40 durometer (or higher), prefabricated, each	HCPCS	Procedure
A5513	For diabetics only, multiple density insert, custom molded from model of patient's foot, total contact with patient's foot, including arch, base layer minimum of 3/16 inch material of Shore A 35 durometer (or higher), includes arch filler and other shaping material, custom fabricated, each	HCPCS	Procedure
G0108	Diabetes outpatient self-management training services, individual, per 30 minutes	HCPCS	Procedure
G0109	Diabetes outpatient self-management training services, group session (2 or more), per 30 minutes	HCPCS	Procedure
G0245	Initial physician evaluation and management of a diabetic patient with diabetic sensory neuropathy resulting in a loss of protective sensation (LOPS) which must include: (1) the diagnosis of LOPS, (2) a patient history, (3) a physical examination that consists of at least the following elements: (a) visual inspection of the forefoot, hindfoot, and toe web spaces, (b) evaluation of a protective sensation, (c) evaluation of foot structure and biomechanics, (d) evaluation of vascular status and skin integrity, and (e) evaluation and recommendation of footwear, and (4) patient education	HCPCS	Procedure

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Code	Description	Code Type	Code Category
G0246	Follow-up physician evaluation and management of a diabetic patient with diabetic sensory neuropathy resulting in a loss of protective sensation (LOPS) to include at least the following: (1) a patient history, (2) a physical examination that includes: (a) visual inspection of the forefoot, hindfoot, and toe web spaces, (b) evaluation of protective sensation, (c) evaluation of foot structure and biomechanics, (d) evaluation of vascular status and skin integrity, and (e) evaluation and recommendation of footwear, and (3) patient education	HCPCS	Procedure
G0247	Routine foot care by a physician of a diabetic patient with diabetic sensory neuropathy resulting in a loss of protective sensation (LOPS) to include the local care of superficial wounds (i.e., superficial to muscle and fascia) and at least the following, if present: (1) local care of superficial wounds, (2) debridement of corns and calluses, and (3) trimming and debridement of nails	HCPCS	Procedure
G8015	Diabetic patient with most recent hemoglobin A1c level (within the last 6 months) documented as greater than 9%	HCPCS	Procedure
G8016	Diabetic patient with most recent hemoglobin A1c level (within the last 6 months) documented as less than or equal to 9%	HCPCS	Procedure
G8017	Clinician documented that diabetic patient was not eligible candidate for hemoglobin A1c measure	HCPCS	Procedure
G8018	Clinician has not provided care for the diabetic patient for the required time for hemoglobin A1c measure (6 months)	HCPCS	Procedure
G8019	Diabetic patient with most recent low-density lipoprotein (within the last 12 months) documented as greater than or equal to 100 mg/dl	HCPCS	Procedure
G8020	Diabetic patient with most recent low-density lipoprotein (within the last 12 months) documented as less than 100 mg/dl	HCPCS	Procedure
G8021	Clinician documented that diabetic patient was not eligible candidate for low-density lipoprotein measure	HCPCS	Procedure
G8022	Clinician has not provided care for the diabetic patient for the required time for low-density lipoprotein measure (12 months)	HCPCS	Procedure
G8023	Diabetic patient with most recent blood pressure (within the last 6 months) documented as equal to or greater than 140 systolic or equal to or greater than 80 mm Hg diastolic	HCPCS	Procedure
G8024	Diabetic patient with most recent blood pressure (within the last 6 months) documented as less than 140 systolic and less than 80 diastolic	HCPCS	Procedure
G8025	Clinician documented that the diabetic patient was not eligible candidate for blood pressure measure	HCPCS	Procedure
G8026	Clinician has not provided care for the diabetic patient for the required time for blood pressure measure (within the last 6 months)	HCPCS	Procedure
G8332	Clinician has not provided care for the diabetic retinopathy patient for the required time for macular edema and retinopathy measurement	HCPCS	Procedure
G8333	Patient documented to have had findings of macular or fundus exam communicated to the physician managing the diabetes care	HCPCS	Procedure
G8334	Documentation of findings of macular or fundus exam not communicated to the physician managing the patient's ongoing diabetes care	HCPCS	Procedure
G8335	Clinician documentation that patient was not an eligible candidate for the findings of their macular or fundus exam being communicated to the physician managing their diabetes care during the reporting year	HCPCS	Procedure
G8336	Clinician has not provided care for the diabetic retinopathy patient for the required time for physician communication measurement	HCPCS	Procedure

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Code	Description	Code Type	Code Category
G8385	Diabetic patients with no documentation of hemoglobin A1c level (within the last 12 months)	HCPCS	Procedure
G8386	Diabetic patients with no documentation of low-density lipoprotein (within the last 12 months)	HCPCS	Procedure
G8390	Diabetic patients with no documentation of blood pressure measurement (within the last 12 months)	HCPCS	Procedure
E11.9	Type 2 diabetes mellitus without complications	ICD-10-CM	Diagnosis
E10.9	Type 1 diabetes mellitus without complications	ICD-10-CM	Diagnosis
E11.65	Type 2 diabetes mellitus with hyperglycemia	ICD-10-CM	Diagnosis
E10.65	Type 1 diabetes mellitus with hyperglycemia	ICD-10-CM	Diagnosis
E11.69	Type 2 diabetes mellitus with other specified complication	ICD-10-CM	Diagnosis
E13.10	Other specified diabetes mellitus with ketoacidosis without coma	ICD-10-CM	Diagnosis
E10.10	Type 1 diabetes mellitus with ketoacidosis without coma	ICD-10-CM	Diagnosis
E11.00	Type 2 diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)	ICD-10-CM	Diagnosis
E11.01	Type 2 diabetes mellitus with hyperosmolarity with coma	ICD-10-CM	Diagnosis
E10.69	Type 1 diabetes mellitus with other specified complication	ICD-10-CM	Diagnosis
E11.641	Type 2 diabetes mellitus with hypoglycemia with coma	ICD-10-CM	Diagnosis
E10.11	Type 1 diabetes mellitus with ketoacidosis with coma	ICD-10-CM	Diagnosis
E10.641	Type 1 diabetes mellitus with hypoglycemia with coma	ICD-10-CM	Diagnosis
E11.29	Type 2 diabetes mellitus with other diabetic kidney complication	ICD-10-CM	Diagnosis
E10.29	Type 1 diabetes mellitus with other diabetic kidney complication	ICD-10-CM	Diagnosis
E11.21	Type 2 diabetes mellitus with diabetic nephropathy	ICD-10-CM	Diagnosis
E10.21	Type 1 diabetes mellitus with diabetic nephropathy	ICD-10-CM	Diagnosis
E11.311	Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E11.319	Type 2 diabetes mellitus with unspecified diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E11.36	Type 2 diabetes mellitus with diabetic cataract	ICD-10-CM	Diagnosis
E11.39	Type 2 diabetes mellitus with other diabetic ophthalmic complication	ICD-10-CM	Diagnosis
E10.311	Type 1 diabetes mellitus with unspecified diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E10.319	Type 1 diabetes mellitus with unspecified diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E10.36	Type 1 diabetes mellitus with diabetic cataract	ICD-10-CM	Diagnosis
E10.37X1	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, right eye	ICD-10-CM	Diagnosis
E10.37X2	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, left eye	ICD-10-CM	Diagnosis
E10.37X3	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral	ICD-10-CM	Diagnosis
E10.37X9	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye	ICD-10-CM	Diagnosis
E10.39	Type 1 diabetes mellitus with other diabetic ophthalmic complication	ICD-10-CM	Diagnosis
E11.40	Type 2 diabetes mellitus with diabetic neuropathy, unspecified	ICD-10-CM	Diagnosis
E10.40	Type 1 diabetes mellitus with diabetic neuropathy, unspecified	ICD-10-CM	Diagnosis
E11.51	Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene	ICD-10-CM	Diagnosis
E10.51	Type 1 diabetes mellitus with diabetic peripheral angiopathy without gangrene	ICD-10-CM	Diagnosis
E11.618	Type 2 diabetes mellitus with other diabetic arthropathy	ICD-10-CM	Diagnosis
E11.620	Type 2 diabetes mellitus with diabetic dermatitis	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
E11.621	Type 2 diabetes mellitus with foot ulcer	ICD-10-CM	Diagnosis
E11.622	Type 2 diabetes mellitus with other skin ulcer	ICD-10-CM	Diagnosis
E11.628	Type 2 diabetes mellitus with other skin complications	ICD-10-CM	Diagnosis
E11.630	Type 2 diabetes mellitus with periodontal disease	ICD-10-CM	Diagnosis
E11.638	Type 2 diabetes mellitus with other oral complications	ICD-10-CM	Diagnosis
E11.649	Type 2 diabetes mellitus with hypoglycemia without coma	ICD-10-CM	Diagnosis
E10.618	Type 1 diabetes mellitus with other diabetic arthropathy	ICD-10-CM	Diagnosis
E10.620	Type 1 diabetes mellitus with diabetic dermatitis	ICD-10-CM	Diagnosis
E10.621	Type 1 diabetes mellitus with foot ulcer	ICD-10-CM	Diagnosis
E10.622	Type 1 diabetes mellitus with other skin ulcer	ICD-10-CM	Diagnosis
E10.628	Type 1 diabetes mellitus with other skin complications	ICD-10-CM	Diagnosis
E10.630	Type 1 diabetes mellitus with periodontal disease	ICD-10-CM	Diagnosis
E10.638	Type 1 diabetes mellitus with other oral complications	ICD-10-CM	Diagnosis
E10.649	Type 1 diabetes mellitus with hypoglycemia without coma	ICD-10-CM	Diagnosis
E11.8	Type 2 diabetes mellitus with unspecified complications	ICD-10-CM	Diagnosis
E10.8	Type 1 diabetes mellitus with unspecified complications	ICD-10-CM	Diagnosis
E13.9	Other specified diabetes mellitus without complications	ICD-10-CM	Diagnosis
E13.00	Other specified diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)	ICD-10-CM	Diagnosis
E13.01	Other specified diabetes mellitus with hyperosmolarity with coma	ICD-10-CM	Diagnosis
E13.11	Other specified diabetes mellitus with ketoacidosis with coma	ICD-10-CM	Diagnosis
E13.641	Other specified diabetes mellitus with hypoglycemia with coma	ICD-10-CM	Diagnosis
E13.21	Other specified diabetes mellitus with diabetic nephropathy	ICD-10-CM	Diagnosis
E13.22	Other specified diabetes mellitus with diabetic chronic kidney disease	ICD-10-CM	Diagnosis
E13.29	Other specified diabetes mellitus with other diabetic kidney complication	ICD-10-CM	Diagnosis
E11.22	Type 2 diabetes mellitus with diabetic chronic kidney disease	ICD-10-CM	Diagnosis
E10.22	Type 1 diabetes mellitus with diabetic chronic kidney disease	ICD-10-CM	Diagnosis
E11.3211	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E11.3212	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E11.3213	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3219	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.3291	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E11.3292	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E11.3293	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3299	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.3311	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E11.3312	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E11.3313	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
E11.3319	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.3391	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E11.3392	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E11.3393	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3399	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.3411	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E11.3412	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E11.3413	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3419	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.3491	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E11.3492	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E11.3493	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3499	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.3511	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E11.3512	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E11.3513	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3519	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.3521	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye	ICD-10-CM	Diagnosis
E11.3522	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye	ICD-10-CM	Diagnosis
E11.3523	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral	ICD-10-CM	Diagnosis
E11.3529	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E11.3531	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye	ICD-10-CM	Diagnosis
E11.3532	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye	ICD-10-CM	Diagnosis
E11.3533	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
E11.3539	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E11.3541	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye	ICD-10-CM	Diagnosis
E11.3542	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye	ICD-10-CM	Diagnosis
E11.3543	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral	ICD-10-CM	Diagnosis
E11.3549	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye	ICD-10-CM	Diagnosis
E11.3551	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, right eye	ICD-10-CM	Diagnosis
E11.3552	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, left eye	ICD-10-CM	Diagnosis
E11.3553	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, bilateral	ICD-10-CM	Diagnosis
E11.3559	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye	ICD-10-CM	Diagnosis
E11.3591	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E11.3592	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E11.3593	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3599	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.3211	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E13.3212	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E13.3213	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3219	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.3291	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E13.3292	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E13.3293	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3299	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.3311	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E13.3312	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E13.3313	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3319	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
E13.3391	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E13.3392	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E13.3393	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3399	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.3411	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E13.3412	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E13.3413	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3419	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.3491	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E13.3492	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E13.3493	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3499	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.3511	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E13.3512	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E13.3513	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3519	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.3521	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye	ICD-10-CM	Diagnosis
E13.3522	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye	ICD-10-CM	Diagnosis
E13.3523	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral	ICD-10-CM	Diagnosis
E13.3529	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E13.3531	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye	ICD-10-CM	Diagnosis
E13.3532	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye	ICD-10-CM	Diagnosis
E13.3533	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral	ICD-10-CM	Diagnosis
E13.3539	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
E13.3541	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye	ICD-10-CM	Diagnosis
E13.3542	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye	ICD-10-CM	Diagnosis
E13.3543	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral	ICD-10-CM	Diagnosis
E13.3549	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye	ICD-10-CM	Diagnosis
E13.3551	Other specified diabetes mellitus with stable proliferative diabetic retinopathy, right eye	ICD-10-CM	Diagnosis
E13.3552	Other specified diabetes mellitus with stable proliferative diabetic retinopathy, left eye	ICD-10-CM	Diagnosis
E13.3553	Other specified diabetes mellitus with stable proliferative diabetic retinopathy, bilateral	ICD-10-CM	Diagnosis
E13.3559	Other specified diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye	ICD-10-CM	Diagnosis
E13.3591	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E13.3592	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E13.3593	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3599	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.311	Other specified diabetes mellitus with unspecified diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E13.319	Other specified diabetes mellitus with unspecified diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E13.36	Other specified diabetes mellitus with diabetic cataract	ICD-10-CM	Diagnosis
E13.37X1	Other specified diabetes mellitus with diabetic macular edema, resolved following treatment, right eye	ICD-10-CM	Diagnosis
E13.37X2	Other specified diabetes mellitus with diabetic macular edema, resolved following treatment, left eye	ICD-10-CM	Diagnosis
E13.37X3	Other specified diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral	ICD-10-CM	Diagnosis
E13.37X9	Other specified diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye	ICD-10-CM	Diagnosis
E13.39	Other specified diabetes mellitus with other diabetic ophthalmic complication	ICD-10-CM	Diagnosis
E11.37X1	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, right eye	ICD-10-CM	Diagnosis
E11.37X2	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, left eye	ICD-10-CM	Diagnosis
E11.37X3	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
E11.37X9	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye	ICD-10-CM	Diagnosis
E10.3211	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E10.3212	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E10.3213	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3219	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.3291	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E10.3292	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E10.3293	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3299	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.3311	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E10.3312	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E10.3313	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3319	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.3391	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E10.3392	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E10.3393	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3399	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.3411	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E10.3412	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E10.3413	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3419	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.3491	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E10.3492	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E10.3493	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
E10.3499	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.3511	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E10.3512	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E10.3513	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3519	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.3521	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye	ICD-10-CM	Diagnosis
E10.3522	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye	ICD-10-CM	Diagnosis
E10.3523	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral	ICD-10-CM	Diagnosis
E10.3529	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E10.3531	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye	ICD-10-CM	Diagnosis
E10.3532	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye	ICD-10-CM	Diagnosis
E10.3533	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral	ICD-10-CM	Diagnosis
E10.3539	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E10.3541	Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye	ICD-10-CM	Diagnosis
E10.3542	Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye	ICD-10-CM	Diagnosis
E10.3543	Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral	ICD-10-CM	Diagnosis
E10.3549	Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye	ICD-10-CM	Diagnosis
E10.3551	Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, right eye	ICD-10-CM	Diagnosis
E10.3552	Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, left eye	ICD-10-CM	Diagnosis
E10.3553	Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, bilateral	ICD-10-CM	Diagnosis
E10.3559	Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye	ICD-10-CM	Diagnosis
E10.3591	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E10.3592	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E10.3593	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3599	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.40	Other specified diabetes mellitus with diabetic neuropathy, unspecified	ICD-10-CM	Diagnosis
E13.41	Other specified diabetes mellitus with diabetic mononeuropathy	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
E13.42	Other specified diabetes mellitus with diabetic polyneuropathy	ICD-10-CM	Diagnosis
E13.43	Other specified diabetes mellitus with diabetic autonomic (poly)neuropathy	ICD-10-CM	Diagnosis
E13.44	Other specified diabetes mellitus with diabetic amyotrophy	ICD-10-CM	Diagnosis
E13.49	Other specified diabetes mellitus with other diabetic neurological complication	ICD-10-CM	Diagnosis
E13.610	Other specified diabetes mellitus with diabetic neuropathic arthropathy	ICD-10-CM	Diagnosis
E11.41	Type 2 diabetes mellitus with diabetic mononeuropathy	ICD-10-CM	Diagnosis
E11.42	Type 2 diabetes mellitus with diabetic polyneuropathy	ICD-10-CM	Diagnosis
E11.43	Type 2 diabetes mellitus with diabetic autonomic (poly)neuropathy	ICD-10-CM	Diagnosis
E11.44	Type 2 diabetes mellitus with diabetic amyotrophy	ICD-10-CM	Diagnosis
E11.49	Type 2 diabetes mellitus with other diabetic neurological complication	ICD-10-CM	Diagnosis
E11.610	Type 2 diabetes mellitus with diabetic neuropathic arthropathy	ICD-10-CM	Diagnosis
E10.41	Type 1 diabetes mellitus with diabetic mononeuropathy	ICD-10-CM	Diagnosis
E10.42	Type 1 diabetes mellitus with diabetic polyneuropathy	ICD-10-CM	Diagnosis
E10.43	Type 1 diabetes mellitus with diabetic autonomic (poly)neuropathy	ICD-10-CM	Diagnosis
E10.44	Type 1 diabetes mellitus with diabetic amyotrophy	ICD-10-CM	Diagnosis
E10.49	Type 1 diabetes mellitus with other diabetic neurological complication	ICD-10-CM	Diagnosis
E10.610	Type 1 diabetes mellitus with diabetic neuropathic arthropathy	ICD-10-CM	Diagnosis
E13.51	Other specified diabetes mellitus with diabetic peripheral angiopathy without gangrene	ICD-10-CM	Diagnosis
E13.52	Other specified diabetes mellitus with diabetic peripheral angiopathy with gangrene	ICD-10-CM	Diagnosis
E13.59	Other specified diabetes mellitus with other circulatory complications	ICD-10-CM	Diagnosis
E11.52	Type 2 diabetes mellitus with diabetic peripheral angiopathy with gangrene	ICD-10-CM	Diagnosis
E11.59	Type 2 diabetes mellitus with other circulatory complications	ICD-10-CM	Diagnosis
E10.52	Type 1 diabetes mellitus with diabetic peripheral angiopathy with gangrene	ICD-10-CM	Diagnosis
E10.59	Type 1 diabetes mellitus with other circulatory complications	ICD-10-CM	Diagnosis
E13.618	Other specified diabetes mellitus with other diabetic arthropathy	ICD-10-CM	Diagnosis
E13.620	Other specified diabetes mellitus with diabetic dermatitis	ICD-10-CM	Diagnosis
E13.621	Other specified diabetes mellitus with foot ulcer	ICD-10-CM	Diagnosis
E13.622	Other specified diabetes mellitus with other skin ulcer	ICD-10-CM	Diagnosis
E13.628	Other specified diabetes mellitus with other skin complications	ICD-10-CM	Diagnosis
E13.630	Other specified diabetes mellitus with periodontal disease	ICD-10-CM	Diagnosis
E13.638	Other specified diabetes mellitus with other oral complications	ICD-10-CM	Diagnosis
E13.649	Other specified diabetes mellitus with hypoglycemia without coma	ICD-10-CM	Diagnosis
E13.65	Other specified diabetes mellitus with hyperglycemia	ICD-10-CM	Diagnosis
E13.69	Other specified diabetes mellitus with other specified complication	ICD-10-CM	Diagnosis
E13.8	Other specified diabetes mellitus with unspecified complications	ICD-10-CM	Diagnosis
Heart Failure			
402.01	Malignant hypertensive heart disease with heart failure	ICD-9-CM	Diagnosis
402.11	Benign hypertensive heart disease with heart failure	ICD-9-CM	Diagnosis
402.91	Hypertensive heart disease, unspecified, with heart failure	ICD-9-CM	Diagnosis
404.01	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.03	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.11	Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.13	Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
404.91	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.93	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
428	Heart failure	ICD-9-CM	Diagnosis
428.0	Congestive heart failure, unspecified	ICD-9-CM	Diagnosis
428.1	Left heart failure	ICD-9-CM	Diagnosis
428.2	Systolic heart failure	ICD-9-CM	Diagnosis
428.20	Unspecified systolic heart failure	ICD-9-CM	Diagnosis
428.21	Acute systolic heart failure	ICD-9-CM	Diagnosis
428.22	Chronic systolic heart failure	ICD-9-CM	Diagnosis
428.23	Acute on chronic systolic heart failure	ICD-9-CM	Diagnosis
428.3	Diastolic heart failure	ICD-9-CM	Diagnosis
428.30	Unspecified diastolic heart failure	ICD-9-CM	Diagnosis
428.31	Acute diastolic heart failure	ICD-9-CM	Diagnosis
428.32	Chronic diastolic heart failure	ICD-9-CM	Diagnosis
428.33	Acute on chronic diastolic heart failure	ICD-9-CM	Diagnosis
428.4	Combined systolic and diastolic heart failure	ICD-9-CM	Diagnosis
428.40	Unspecified combined systolic and diastolic heart failure	ICD-9-CM	Diagnosis
428.41	Acute combined systolic and diastolic heart failure	ICD-9-CM	Diagnosis
428.42	Chronic combined systolic and diastolic heart failure	ICD-9-CM	Diagnosis
428.43	Acute on chronic combined systolic and diastolic heart failure	ICD-9-CM	Diagnosis
428.9	Unspecified heart failure	ICD-9-CM	Diagnosis
37.66	Insertion of implantable heart assist system	ICD-9-CM	Diagnosis
33980	Removal of ventricular assist device, implantable intracorporeal, single ventricle	CPT-4	Procedure
92970	Cardioassist-method of circulatory assist; internal	CPT-4	Procedure
92971	Cardioassist-method of circulatory assist; external	CPT-4	Procedure
G8027	Heart failure patient with left ventricular systolic dysfunction (LVSD) documented to be on either angiotensin-converting enzyme-inhibitor or angiotensin-receptor blocker (ACE-1 or ARB) therapy	HCPCS	Procedure
G8028	Heart failure patient with left ventricular systolic dysfunction (LVSD) not documented to be on either angiotensin-converting enzyme-inhibitor or angiotensin-receptor blocker (ACE-1 or ARB) therapy	HCPCS	Procedure
G8029	Clinician documented that heart failure patient was not an eligible candidate for either angiotensin-converting enzyme-inhibitor or angiotensin-receptor blocker (ACE-1 or ARB) therapy measure	HCPCS	Procedure
G8030	Heart failure patient with left ventricular systolic dysfunction (LVSD) documented to be on beta-blocker therapy	HCPCS	Procedure
G8031	Heart failure patient with left ventricular systolic dysfunction (LVSD) not documented to be on beta-blocker therapy	HCPCS	Procedure
G8032	Clinician documented that heart failure patient was not eligible candidate for beta-blocker therapy measure	HCPCS	Procedure
G8184	Clinician documented that patient with heart failure and atrial fibrillation was not an eligible candidate for warfarin therapy measure	HCPCS	Procedure
I11.0	Hypertensive heart disease with heart failure	ICD-10-CM	Diagnosis
I13.0	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
I13.2	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease	ICD-10-CM	Diagnosis
I50.1	Left ventricular failure, unspecified	ICD-10-CM	Diagnosis
I50.20	Unspecified systolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.21	Acute systolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.22	Chronic systolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.23	Acute on chronic systolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.30	Unspecified diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.31	Acute diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.32	Chronic diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.33	Acute on chronic diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.40	Unspecified combined systolic (congestive) and diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.41	Acute combined systolic (congestive) and diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.42	Chronic combined systolic (congestive) and diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.43	Acute on chronic combined systolic (congestive) and diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.810	Right heart failure, unspecified	ICD-10-CM	Diagnosis
I50.811	Acute right heart failure	ICD-10-CM	Diagnosis
I50.812	Chronic right heart failure	ICD-10-CM	Diagnosis
I50.813	Acute on chronic right heart failure	ICD-10-CM	Diagnosis
I50.814	Right heart failure due to left heart failure	ICD-10-CM	Diagnosis
I50.82	Biventricular heart failure	ICD-10-CM	Diagnosis
I50.83	High output heart failure	ICD-10-CM	Diagnosis
I50.84	End stage heart failure	ICD-10-CM	Diagnosis
I50.89	Other heart failure	ICD-10-CM	Diagnosis
I50.9	Heart failure, unspecified	ICD-10-CM	Diagnosis
02HA0QZ	Insertion of Implantable Heart Assist System into Heart, Open Approach	ICD-10-PCS	Procedure
02HA3QZ	Insertion of Implantable Heart Assist System into Heart, Percutaneous Approach	ICD-10-PCS	Procedure
02HA4QZ	Insertion of Implantable Heart Assist System into Heart, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
G8183	Patient with heart failure and atrial fibrillation documented to be on warfarin therapy	HCPCS	Procedure
Hospitalized Bleeding			
280.0	Iron deficiency anemia secondary to blood loss (chronic)	ICD-9-CM	Diagnosis
285.1	Acute posthemorrhagic anemia	ICD-9-CM	Diagnosis
285.9	Unspecified anemia	ICD-9-CM	Diagnosis
423.0	Hemopericardium	ICD-9-CM	Diagnosis
430	Subarachnoid hemorrhage	ICD-9-CM	Diagnosis
431	Intracerebral hemorrhage	ICD-9-CM	Diagnosis
432.0	Nontraumatic extradural hemorrhage	ICD-9-CM	Diagnosis
432.1	Subdural hemorrhage	ICD-9-CM	Diagnosis
432.9	Unspecified intracranial hemorrhage	ICD-9-CM	Diagnosis
455	Hemorrhoids	ICD-9-CM	Diagnosis
455.0	Internal hemorrhoids without mention of complication	ICD-9-CM	Diagnosis
455.1	Internal thrombosed hemorrhoids	ICD-9-CM	Diagnosis
455.2	Internal hemorrhoids with other complication	ICD-9-CM	Diagnosis
455.3	External hemorrhoids without mention of complication	ICD-9-CM	Diagnosis
455.4	External thrombosed hemorrhoids	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
455.5	External hemorrhoids with other complication	ICD-9-CM	Diagnosis
455.6	Unspecified hemorrhoids without mention of complication	ICD-9-CM	Diagnosis
455.7	Unspecified thrombosed hemorrhoids	ICD-9-CM	Diagnosis
455.8	Unspecified hemorrhoids with other complication	ICD-9-CM	Diagnosis
455.9	Residual hemorrhoidal skin tags	ICD-9-CM	Diagnosis
456.0	Esophageal varices with bleeding	ICD-9-CM	Diagnosis
456.20	Esophageal varices with bleeding in diseases classified elsewhere	ICD-9-CM	Diagnosis
459.0	Unspecified hemorrhage	ICD-9-CM	Diagnosis
530.1	Esophagitis	ICD-9-CM	Diagnosis
530.10	Unspecified esophagitis	ICD-9-CM	Diagnosis
530.11	Reflux esophagitis	ICD-9-CM	Diagnosis
530.12	Acute esophagitis	ICD-9-CM	Diagnosis
530.13	Eosinophilic esophagitis	ICD-9-CM	Diagnosis
530.19	Other esophagitis	ICD-9-CM	Diagnosis
530.7	Gastroesophageal laceration-hemorrhage syndrome	ICD-9-CM	Diagnosis
530.82	Esophageal hemorrhage	ICD-9-CM	Diagnosis
531.0	Acute gastric ulcer with hemorrhage	ICD-9-CM	Diagnosis
531.00	Acute gastric ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
531.01	Acute gastric ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
531.1	Acute gastric ulcer with perforation	ICD-9-CM	Diagnosis
531.10	Acute gastric ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.11	Acute gastric ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
531.2	Acute gastric ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
531.20	Acute gastric ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.21	Acute gastric ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
531.3	Acute gastric ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
531.30	Acute gastric ulcer without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
531.31	Acute gastric ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
531.4	Chronic or unspecified gastric ulcer with hemorrhage	ICD-9-CM	Diagnosis
531.40	Chronic or unspecified gastric ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
531.41	Chronic or unspecified gastric ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
531.5	Chronic or unspecified gastric ulcer with perforation	ICD-9-CM	Diagnosis
531.50	Chronic or unspecified gastric ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.51	Chronic or unspecified gastric ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
531.6	Chronic or unspecified gastric ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
531.60	Chronic or unspecified gastric ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.61	Chronic or unspecified gastric ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
531.7	Chronic gastric ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
531.70	Chronic gastric ulcer without mention of hemorrhage, perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.71	Chronic gastric ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
531.9	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
531.90	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
531.91	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
532.0	Acute duodenal ulcer with hemorrhage	ICD-9-CM	Diagnosis
532.00	Acute duodenal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
532.01	Acute duodenal ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
532.1	Acute duodenal ulcer with perforation	ICD-9-CM	Diagnosis
532.10	Acute duodenal ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
532.11	Acute duodenal ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
532.2	Acute duodenal ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
532.20	Acute duodenal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
532.21	Acute duodenal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
532.3	Acute duodenal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
532.30	Acute duodenal ulcer without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
532.31	Acute duodenal ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
532.4	Chronic or unspecified duodenal ulcer with hemorrhage	ICD-9-CM	Diagnosis
532.40	Duodenal ulcer, chronic or unspecified, with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
532.41	Chronic or unspecified duodenal ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
532.5	Chronic or unspecified duodenal ulcer with perforation	ICD-9-CM	Diagnosis
532.50	Chronic or unspecified duodenal ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
532.51	Chronic or unspecified duodenal ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
532.6	Chronic or unspecified duodenal ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
532.60	Chronic or unspecified duodenal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
532.61	Chronic or unspecified duodenal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
532.7	Chronic duodenal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
532.70	Chronic duodenal ulcer without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
532.71	Chronic duodenal ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
532.9	Duodenal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
532.90	Duodenal ulcer, unspecified as acute or chronic, without hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
532.91	Duodenal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
533.0	Acute peptic ulcer, unspecified site, with hemorrhage	ICD-9-CM	Diagnosis
533.00	Acute peptic ulcer, unspecified site, with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
533.01	Acute peptic ulcer, unspecified site, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
533.1	Acute peptic ulcer, unspecified site, with perforation	ICD-9-CM	Diagnosis
533.10	Acute peptic ulcer, unspecified site, with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
533.11	Acute peptic ulcer, unspecified site, with perforation and obstruction	ICD-9-CM	Diagnosis
533.2	Acute peptic ulcer, unspecified site, with hemorrhage and perforation	ICD-9-CM	Diagnosis
533.20	Acute peptic ulcer, unspecified site, with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
533.21	Acute peptic ulcer, unspecified site, with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
533.3	Acute peptic ulcer, unspecified site, without mention of hemorrhage and perforation	ICD-9-CM	Diagnosis
533.30	Acute peptic ulcer, unspecified site, without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
533.31	Acute peptic ulcer, unspecified site, without mention of hemorrhage and perforation, with obstruction	ICD-9-CM	Diagnosis
533.4	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage	ICD-9-CM	Diagnosis
533.40	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
533.41	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
533.5	Chronic or unspecified peptic ulcer, unspecified site, with perforation	ICD-9-CM	Diagnosis
533.50	Chronic or unspecified peptic ulcer, unspecified site, with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
533.51	Chronic or unspecified peptic ulcer, unspecified site, with perforation and obstruction	ICD-9-CM	Diagnosis
533.6	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage and perforation	ICD-9-CM	Diagnosis
533.60	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
533.61	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
533.7	Chronic peptic ulcer, unspecified site, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
533.70	Chronic peptic ulcer, unspecified site, without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
533.71	Chronic peptic ulcer of unspecified site without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
533.9	Peptic ulcer, unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
533.90	Peptic ulcer, unspecified site, unspecified as acute or chronic, without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
533.91	Peptic ulcer, unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
534.0	Acute gastrojejunal ulcer with hemorrhage	ICD-9-CM	Diagnosis
534.00	Acute gastrojejunal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
534.01	Acute gastrojejunal ulcer, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
534.1	Acute gastrojejunal ulcer with perforation	ICD-9-CM	Diagnosis
534.10	Acute gastrojejunal ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
534.11	Acute gastrojejunal ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
534.2	Acute gastrojejunal ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
534.20	Acute gastrojejunal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
534.21	Acute gastrojejunal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
534.3	Acute gastrojejunal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
534.30	Acute gastrojejunal ulcer without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
534.31	Acute gastrojejunal ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
534.4	Chronic or unspecified gastrojejunal ulcer with hemorrhage	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
534.40	Chronic or unspecified gastrojejunal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
534.41	Chronic or unspecified gastrojejunal ulcer, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
534.5	Chronic or unspecified gastrojejunal ulcer with perforation	ICD-9-CM	Diagnosis
534.50	Chronic or unspecified gastrojejunal ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
534.51	Chronic or unspecified gastrojejunal ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
534.6	Chronic or unspecified gastrojejunal ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
534.60	Chronic or unspecified gastrojejunal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
534.61	Chronic or unspecified gastrojejunal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
534.7	Chronic gastrojejunal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
534.70	Chronic gastrojejunal ulcer without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
534.71	Chronic gastrojejunal ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
534.9	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
534.90	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
534.91	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
535.00	Acute gastritis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.01	Acute gastritis with hemorrhage	ICD-9-CM	Diagnosis
535.10	Atrophic gastritis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.11	Atrophic gastritis with hemorrhage	ICD-9-CM	Diagnosis
535.20	Gastric mucosal hypertrophy without mention of hemorrhage	ICD-9-CM	Diagnosis
535.21	Gastric mucosal hypertrophy with hemorrhage	ICD-9-CM	Diagnosis
535.30	Alcoholic gastritis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.31	Alcoholic gastritis with hemorrhage	ICD-9-CM	Diagnosis
535.40	Other specified gastritis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.41	Other specified gastritis with hemorrhage	ICD-9-CM	Diagnosis
535.50	Unspecified gastritis and gastroduodenitis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.51	Unspecified gastritis and gastroduodenitis with hemorrhage	ICD-9-CM	Diagnosis
535.60	Duodenitis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.61	Duodenitis with hemorrhage	ICD-9-CM	Diagnosis
537.83	Angiodysplasia of stomach and duodenum with hemorrhage	ICD-9-CM	Diagnosis
562.00	Diverticulosis of small intestine (without mention of hemorrhage)	ICD-9-CM	Diagnosis
562.01	Diverticulitis of small intestine (without mention of hemorrhage)	ICD-9-CM	Diagnosis
562.02	Diverticulosis of small intestine with hemorrhage	ICD-9-CM	Diagnosis
562.03	Diverticulitis of small intestine with hemorrhage	ICD-9-CM	Diagnosis
562.10	Diverticulosis of colon (without mention of hemorrhage)	ICD-9-CM	Diagnosis
562.11	Diverticulitis of colon (without mention of hemorrhage)	ICD-9-CM	Diagnosis
562.12	Diverticulosis of colon with hemorrhage	ICD-9-CM	Diagnosis
562.13	Diverticulitis of colon with hemorrhage	ICD-9-CM	Diagnosis
568.81	Hemoperitoneum (nontraumatic)	ICD-9-CM	Diagnosis
569.3	Hemorrhage of rectum and anus	ICD-9-CM	Diagnosis
569.85	Angiodysplasia of intestine with hemorrhage	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
578.0	Hematemesis	ICD-9-CM	Diagnosis
578.1	Blood in stool	ICD-9-CM	Diagnosis
578.9	Hemorrhage of gastrointestinal tract, unspecified	ICD-9-CM	Diagnosis
593.81	Vascular disorders of kidney	ICD-9-CM	Diagnosis
599.7	Hematuria	ICD-9-CM	Diagnosis
599.70	Hematuria, unspecified	ICD-9-CM	Diagnosis
599.71	Gross hematuria	ICD-9-CM	Diagnosis
599.72	Microscopic hematuria	ICD-9-CM	Diagnosis
623.8	Other specified noninflammatory disorder of vagina	ICD-9-CM	Diagnosis
626.2	Excessive or frequent menstruation	ICD-9-CM	Diagnosis
626.6	Metrorrhagia	ICD-9-CM	Diagnosis
719.1	Hemarthrosis	ICD-9-CM	Diagnosis
719.10	Hemarthrosis, site unspecified	ICD-9-CM	Diagnosis
719.11	Hemarthrosis, shoulder region	ICD-9-CM	Diagnosis
719.12	Hemarthrosis, upper arm	ICD-9-CM	Diagnosis
719.13	Hemarthrosis, forearm	ICD-9-CM	Diagnosis
719.14	Hemarthrosis, hand	ICD-9-CM	Diagnosis
719.15	Hemarthrosis, pelvic region and thigh	ICD-9-CM	Diagnosis
719.16	Hemarthrosis, lower leg	ICD-9-CM	Diagnosis
719.17	Hemarthrosis, ankle and foot	ICD-9-CM	Diagnosis
719.18	Hemarthrosis, other specified site	ICD-9-CM	Diagnosis
719.19	Hemarthrosis, multiple sites	ICD-9-CM	Diagnosis
784.7	Epistaxis	ICD-9-CM	Diagnosis
784.8	Hemorrhage from throat	ICD-9-CM	Diagnosis
786.3	Hemoptysis	ICD-9-CM	Diagnosis
790.92	Abnormal coagulation profile	ICD-9-CM	Diagnosis
852.0	Subarachnoid hemorrhage following injury without mention of open intracranial wound	ICD-9-CM	Diagnosis
852.00	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, unspecified state of consciousness	ICD-9-CM	Diagnosis
852.01	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, no loss of consciousness	ICD-9-CM	Diagnosis
852.02	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, brief (less than 1 hour) loss of consciousness	ICD-9-CM	Diagnosis
852.03	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
852.04	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
852.05	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
852.06	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
852.09	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, unspecified concussion	ICD-9-CM	Diagnosis
852.2	Subdural hemorrhage following injury without mention of open intracranial wound	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
852.20	Subdural hemorrhage following injury, without mention of open intracranial wound, unspecified state of consciousness	ICD-9-CM	Diagnosis
852.21	Subdural hemorrhage following injury, without mention of open intracranial wound, no loss of consciousness	ICD-9-CM	Diagnosis
852.22	Subdural hemorrhage following injury, without mention of open intracranial wound, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
852.23	Subdural hemorrhage following injury, without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
852.24	Subdural hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
852.25	Subdural hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
852.26	Subdural hemorrhage following injury, without mention of open intracranial wound, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
852.29	Subdural hemorrhage following injury, without mention of open intracranial wound, unspecified concussion	ICD-9-CM	Diagnosis
852.4	Extradural hemorrhage following injury without mention of open intracranial wound	ICD-9-CM	Diagnosis
852.40	Extradural hemorrhage following injury, without mention of open intracranial wound, unspecified state of consciousness	ICD-9-CM	Diagnosis
852.41	Extradural hemorrhage following injury, without mention of open intracranial wound, no loss of consciousness	ICD-9-CM	Diagnosis
852.42	Extradural hemorrhage following injury, without mention of open intracranial wound, brief (less than 1 hour) loss of consciousness	ICD-9-CM	Diagnosis
852.43	Extradural hemorrhage following injury, without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
852.44	Extradural hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
852.45	Extradural hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
852.46	Extradural hemorrhage following injury, without mention of open intracranial wound, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
852.49	Extradural hemorrhage following injury, without mention of open intracranial wound, unspecified concussion	ICD-9-CM	Diagnosis
853.0	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound	ICD-9-CM	Diagnosis
D50.0	Iron deficiency anemia secondary to blood loss (chronic)	ICD-10-CM	Diagnosis
D62	Acute posthemorrhagic anemia	ICD-10-CM	Diagnosis
D64.9	Anemia, unspecified	ICD-10-CM	Diagnosis
I31.2	Hemopericardium, not elsewhere classified	ICD-10-CM	Diagnosis
I60.00	Nontraumatic subarachnoid hemorrhage from unspecified carotid siphon and bifurcation	ICD-10-CM	Diagnosis
I60.01	Nontraumatic subarachnoid hemorrhage from right carotid siphon and bifurcation	ICD-10-CM	Diagnosis
I60.02	Nontraumatic subarachnoid hemorrhage from left carotid siphon and bifurcation	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
I60.10	Nontraumatic subarachnoid hemorrhage from unspecified middle cerebral artery	ICD-10-CM	Diagnosis
I60.11	Nontraumatic subarachnoid hemorrhage from right middle cerebral artery	ICD-10-CM	Diagnosis
I60.12	Nontraumatic subarachnoid hemorrhage from left middle cerebral artery	ICD-10-CM	Diagnosis
I60.2	Nontraumatic subarachnoid hemorrhage from anterior communicating artery	ICD-10-CM	Diagnosis
I60.30	Nontraumatic subarachnoid hemorrhage from unspecified posterior communicating artery	ICD-10-CM	Diagnosis
I60.31	Nontraumatic subarachnoid hemorrhage from right posterior communicating artery	ICD-10-CM	Diagnosis
I60.32	Nontraumatic subarachnoid hemorrhage from left posterior communicating artery	ICD-10-CM	Diagnosis
I60.4	Nontraumatic subarachnoid hemorrhage from basilar artery	ICD-10-CM	Diagnosis
I60.50	Nontraumatic subarachnoid hemorrhage from unspecified vertebral artery	ICD-10-CM	Diagnosis
I60.51	Nontraumatic subarachnoid hemorrhage from right vertebral artery	ICD-10-CM	Diagnosis
I60.52	Nontraumatic subarachnoid hemorrhage from left vertebral artery	ICD-10-CM	Diagnosis
I60.6	Nontraumatic subarachnoid hemorrhage from other intracranial arteries	ICD-10-CM	Diagnosis
I60.7	Nontraumatic subarachnoid hemorrhage from unspecified intracranial artery	ICD-10-CM	Diagnosis
I60.8	Other nontraumatic subarachnoid hemorrhage	ICD-10-CM	Diagnosis
I60.9	Nontraumatic subarachnoid hemorrhage, unspecified	ICD-10-CM	Diagnosis
I61.0	Nontraumatic intracerebral hemorrhage in hemisphere, subcortical	ICD-10-CM	Diagnosis
I61.1	Nontraumatic intracerebral hemorrhage in hemisphere, cortical	ICD-10-CM	Diagnosis
I61.2	Nontraumatic intracerebral hemorrhage in hemisphere, unspecified	ICD-10-CM	Diagnosis
I61.3	Nontraumatic intracerebral hemorrhage in brain stem	ICD-10-CM	Diagnosis
I61.4	Nontraumatic intracerebral hemorrhage in cerebellum	ICD-10-CM	Diagnosis
I61.5	Nontraumatic intracerebral hemorrhage, intraventricular	ICD-10-CM	Diagnosis
I61.6	Nontraumatic intracerebral hemorrhage, multiple localized	ICD-10-CM	Diagnosis
I61.8	Other nontraumatic intracerebral hemorrhage	ICD-10-CM	Diagnosis
I61.9	Nontraumatic intracerebral hemorrhage, unspecified	ICD-10-CM	Diagnosis
I62.00	Nontraumatic subdural hemorrhage, unspecified	ICD-10-CM	Diagnosis
I62.01	Nontraumatic acute subdural hemorrhage	ICD-10-CM	Diagnosis
I62.02	Nontraumatic subacute subdural hemorrhage	ICD-10-CM	Diagnosis
I62.03	Nontraumatic chronic subdural hemorrhage	ICD-10-CM	Diagnosis
I62.1	Nontraumatic extradural hemorrhage	ICD-10-CM	Diagnosis
I62.9	Nontraumatic intracranial hemorrhage, unspecified	ICD-10-CM	Diagnosis
I85.01	Esophageal varices with bleeding	ICD-10-CM	Diagnosis
I85.11	Secondary esophageal varices with bleeding	ICD-10-CM	Diagnosis
K20.0	Eosinophilic esophagitis	ICD-10-CM	Diagnosis
K20.8	Other esophagitis	ICD-10-CM	Diagnosis
K20.9	Esophagitis, unspecified	ICD-10-CM	Diagnosis
K21.0	Gastro-esophageal reflux disease with esophagitis	ICD-10-CM	Diagnosis
K22.6	Gastro-esophageal laceration-hemorrhage syndrome	ICD-10-CM	Diagnosis
K22.8	Other specified diseases of esophagus	ICD-10-CM	Diagnosis
K25.0	Acute gastric ulcer with hemorrhage	ICD-10-CM	Diagnosis
K25.1	Acute gastric ulcer with perforation	ICD-10-CM	Diagnosis
K25.2	Acute gastric ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K25.3	Acute gastric ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K25.4	Chronic or unspecified gastric ulcer with hemorrhage	ICD-10-CM	Diagnosis
K25.5	Chronic or unspecified gastric ulcer with perforation	ICD-10-CM	Diagnosis
K25.6	Chronic or unspecified gastric ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K25.7	Chronic gastric ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K25.9	Gastric ulcer, unspecified as acute or chronic, without hemorrhage or perforation	ICD-10-CM	Diagnosis
K26.0	Acute duodenal ulcer with hemorrhage	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
K26.1	Acute duodenal ulcer with perforation	ICD-10-CM	Diagnosis
K26.2	Acute duodenal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K26.3	Acute duodenal ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K26.4	Chronic or unspecified duodenal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K26.5	Chronic or unspecified duodenal ulcer with perforation	ICD-10-CM	Diagnosis
K26.6	Chronic or unspecified duodenal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K26.7	Chronic duodenal ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K26.9	Duodenal ulcer, unspecified as acute or chronic, without hemorrhage or perforation	ICD-10-CM	Diagnosis
K27.0	Acute peptic ulcer, site unspecified, with hemorrhage	ICD-10-CM	Diagnosis
K27.1	Acute peptic ulcer, site unspecified, with perforation	ICD-10-CM	Diagnosis
K27.2	Acute peptic ulcer, site unspecified, with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K27.3	Acute peptic ulcer, site unspecified, without hemorrhage or perforation	ICD-10-CM	Diagnosis
K27.4	Chronic or unspecified peptic ulcer, site unspecified, with hemorrhage	ICD-10-CM	Diagnosis
K27.5	Chronic or unspecified peptic ulcer, site unspecified, with perforation	ICD-10-CM	Diagnosis
K27.6	Chronic or unspecified peptic ulcer, site unspecified, with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K27.7	Chronic peptic ulcer, site unspecified, without hemorrhage or perforation	ICD-10-CM	Diagnosis
K27.9	Peptic ulcer, site unspecified, unspecified as acute or chronic, without hemorrhage or perforation	ICD-10-CM	Diagnosis
K28.0	Acute gastrojejunal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K28.1	Acute gastrojejunal ulcer with perforation	ICD-10-CM	Diagnosis
K28.2	Acute gastrojejunal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K28.3	Acute gastrojejunal ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K28.4	Chronic or unspecified gastrojejunal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K28.5	Chronic or unspecified gastrojejunal ulcer with perforation	ICD-10-CM	Diagnosis
K28.6	Chronic or unspecified gastrojejunal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K28.7	Chronic gastrojejunal ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K28.9	Gastrojejunal ulcer, unspecified as acute or chronic, without hemorrhage or perforation	ICD-10-CM	Diagnosis
K29.00	Acute gastritis without bleeding	ICD-10-CM	Diagnosis
K29.01	Acute gastritis with bleeding	ICD-10-CM	Diagnosis
K29.20	Alcoholic gastritis without bleeding	ICD-10-CM	Diagnosis
K29.21	Alcoholic gastritis with bleeding	ICD-10-CM	Diagnosis
K29.30	Chronic superficial gastritis without bleeding	ICD-10-CM	Diagnosis
K29.31	Chronic superficial gastritis with bleeding	ICD-10-CM	Diagnosis
K29.40	Chronic atrophic gastritis without bleeding	ICD-10-CM	Diagnosis
K29.41	Chronic atrophic gastritis with bleeding	ICD-10-CM	Diagnosis
K29.50	Unspecified chronic gastritis without bleeding	ICD-10-CM	Diagnosis
K29.51	Unspecified chronic gastritis with bleeding	ICD-10-CM	Diagnosis
K29.60	Other gastritis without bleeding	ICD-10-CM	Diagnosis
K29.61	Other gastritis with bleeding	ICD-10-CM	Diagnosis
K29.70	Gastritis, unspecified, without bleeding	ICD-10-CM	Diagnosis
K29.71	Gastritis, unspecified, with bleeding	ICD-10-CM	Diagnosis
K29.80	Duodenitis without bleeding	ICD-10-CM	Diagnosis
K29.81	Duodenitis with bleeding	ICD-10-CM	Diagnosis
K29.90	Gastroduodenitis, unspecified, without bleeding	ICD-10-CM	Diagnosis
K29.91	Gastroduodenitis, unspecified, with bleeding	ICD-10-CM	Diagnosis
K31.811	Angiodysplasia of stomach and duodenum with bleeding	ICD-10-CM	Diagnosis
K55.21	Angiodysplasia of colon with hemorrhage	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
K56.699	Other intestinal obstruction unspecified as to partial versus complete obstruction	ICD-10-CM	Diagnosis
K57.00	Diverticulitis of small intestine with perforation and abscess without bleeding	ICD-10-CM	Diagnosis
K57.01	Diverticulitis of small intestine with perforation and abscess with bleeding	ICD-10-CM	Diagnosis
K57.10	Diverticulosis of small intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.11	Diverticulosis of small intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.12	Diverticulitis of small intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.13	Diverticulitis of small intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.20	Diverticulitis of large intestine with perforation and abscess without bleeding	ICD-10-CM	Diagnosis
K57.21	Diverticulitis of large intestine with perforation and abscess with bleeding	ICD-10-CM	Diagnosis
K57.30	Diverticulosis of large intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.31	Diverticulosis of large intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.32	Diverticulitis of large intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.33	Diverticulitis of large intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.40	Diverticulitis of both small and large intestine with perforation and abscess without bleeding	ICD-10-CM	Diagnosis
K57.41	Diverticulitis of both small and large intestine with perforation and abscess with bleeding	ICD-10-CM	Diagnosis
K57.50	Diverticulosis of both small and large intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.51	Diverticulosis of both small and large intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.52	Diverticulitis of both small and large intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.53	Diverticulitis of both small and large intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.80	Diverticulitis of intestine, part unspecified, with perforation and abscess without bleeding	ICD-10-CM	Diagnosis
K57.81	Diverticulitis of intestine, part unspecified, with perforation and abscess with bleeding	ICD-10-CM	Diagnosis
K57.90	Diverticulosis of intestine, part unspecified, without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.91	Diverticulosis of intestine, part unspecified, without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.92	Diverticulitis of intestine, part unspecified, without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.93	Diverticulitis of intestine, part unspecified, without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K62.5	Hemorrhage of anus and rectum	ICD-10-CM	Diagnosis
K64.0	First degree hemorrhoids	ICD-10-CM	Diagnosis
K64.1	Second degree hemorrhoids	ICD-10-CM	Diagnosis
K64.2	Third degree hemorrhoids	ICD-10-CM	Diagnosis
K64.3	Fourth degree hemorrhoids	ICD-10-CM	Diagnosis
K64.4	Residual hemorrhoidal skin tags	ICD-10-CM	Diagnosis
K64.5	Perianal venous thrombosis	ICD-10-CM	Diagnosis
K64.8	Other hemorrhoids	ICD-10-CM	Diagnosis
K64.9	Unspecified hemorrhoids	ICD-10-CM	Diagnosis
K66.1	Hemoperitoneum	ICD-10-CM	Diagnosis
K92.0	Hematemesis	ICD-10-CM	Diagnosis
K92.1	Melena	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
K92.2	Gastrointestinal hemorrhage, unspecified	ICD-10-CM	Diagnosis
M25.00	Hemarthrosis, unspecified joint	ICD-10-CM	Diagnosis
M25.011	Hemarthrosis, right shoulder	ICD-10-CM	Diagnosis
M25.012	Hemarthrosis, left shoulder	ICD-10-CM	Diagnosis
M25.019	Hemarthrosis, unspecified shoulder	ICD-10-CM	Diagnosis
M25.021	Hemarthrosis, right elbow	ICD-10-CM	Diagnosis
M25.022	Hemarthrosis, left elbow	ICD-10-CM	Diagnosis
M25.029	Hemarthrosis, unspecified elbow	ICD-10-CM	Diagnosis
M25.031	Hemarthrosis, right wrist	ICD-10-CM	Diagnosis
M25.032	Hemarthrosis, left wrist	ICD-10-CM	Diagnosis
M25.039	Hemarthrosis, unspecified wrist	ICD-10-CM	Diagnosis
M25.041	Hemarthrosis, right hand	ICD-10-CM	Diagnosis
M25.042	Hemarthrosis, left hand	ICD-10-CM	Diagnosis
M25.049	Hemarthrosis, unspecified hand	ICD-10-CM	Diagnosis
M25.051	Hemarthrosis, right hip	ICD-10-CM	Diagnosis
M25.052	Hemarthrosis, left hip	ICD-10-CM	Diagnosis
M25.059	Hemarthrosis, unspecified hip	ICD-10-CM	Diagnosis
M25.061	Hemarthrosis, right knee	ICD-10-CM	Diagnosis
M25.062	Hemarthrosis, left knee	ICD-10-CM	Diagnosis
M25.069	Hemarthrosis, unspecified knee	ICD-10-CM	Diagnosis
M25.071	Hemarthrosis, right ankle	ICD-10-CM	Diagnosis
M25.072	Hemarthrosis, left ankle	ICD-10-CM	Diagnosis
M25.073	Hemarthrosis, unspecified ankle	ICD-10-CM	Diagnosis
M25.074	Hemarthrosis, right foot	ICD-10-CM	Diagnosis
M25.075	Hemarthrosis, left foot	ICD-10-CM	Diagnosis
M25.076	Hemarthrosis, unspecified foot	ICD-10-CM	Diagnosis
M25.08	Hemarthrosis, other specified site	ICD-10-CM	Diagnosis
N28.0	Ischemia and infarction of kidney	ICD-10-CM	Diagnosis
N89.8	Other specified noninflammatory disorders of vagina	ICD-10-CM	Diagnosis
N92.0	Excessive and frequent menstruation with regular cycle	ICD-10-CM	Diagnosis
N92.1	Excessive and frequent menstruation with irregular cycle	ICD-10-CM	Diagnosis
R04.0	Epistaxis	ICD-10-CM	Diagnosis
R04.1	Hemorrhage from throat	ICD-10-CM	Diagnosis
R31.0	Gross hematuria	ICD-10-CM	Diagnosis
R31.1	Benign essential microscopic hematuria	ICD-10-CM	Diagnosis
R31.21	Asymptomatic microscopic hematuria	ICD-10-CM	Diagnosis
R31.29	Other microscopic hematuria	ICD-10-CM	Diagnosis
R31.9	Hematuria, unspecified	ICD-10-CM	Diagnosis
R58	Hemorrhage, not elsewhere classified	ICD-10-CM	Diagnosis
R79.1	Abnormal coagulation profile	ICD-10-CM	Diagnosis
S06.4X0A	Epidural hemorrhage without loss of consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.4X1A	Epidural hemorrhage with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM	Diagnosis
S06.4X2A	Epidural hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.4X3A	Epidural hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.4X4A	Epidural hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S06.4X5A	Epidural hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM	Diagnosis
S06.4X6A	Epidural hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM	Diagnosis
S06.4X7A	Epidural hemorrhage with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.4X8A	Epidural hemorrhage with loss of consciousness of any duration with death due to other causes prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.4X9A	Epidural hemorrhage with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM	Diagnosis
S06.5X0A	Traumatic subdural hemorrhage without loss of consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.5X1A	Traumatic subdural hemorrhage with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM	Diagnosis
S06.5X2A	Traumatic subdural hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.5X3A	Traumatic subdural hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.5X4A	Traumatic subdural hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM	Diagnosis
S06.5X5A	Traumatic subdural hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM	Diagnosis
S06.5X6A	Traumatic subdural hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM	Diagnosis
S06.5X7A	Traumatic subdural hemorrhage with loss of consciousness of any duration with death due to brain injury before regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.5X8A	Traumatic subdural hemorrhage with loss of consciousness of any duration with death due to other cause before regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.5X9A	Traumatic subdural hemorrhage with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM	Diagnosis
S06.6X0A	Traumatic subarachnoid hemorrhage without loss of consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.6X1A	Traumatic subarachnoid hemorrhage with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM	Diagnosis
S06.6X2A	Traumatic subarachnoid hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.6X3A	Traumatic subarachnoid hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.6X4A	Traumatic subarachnoid hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM	Diagnosis
S06.6X5A	Traumatic subarachnoid hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM	Diagnosis
S06.6X6A	Traumatic subarachnoid hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM	Diagnosis
S06.6X7A	Traumatic subarachnoid hemorrhage with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S06.6X8A	Traumatic subarachnoid hemorrhage with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.6X9A	Traumatic subarachnoid hemorrhage with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM	Diagnosis
Hypercholesterolemia			
272.0	Pure hypercholesterolemia	ICD-9-CM	Diagnosis
272.2	Mixed hyperlipidemia	ICD-9-CM	Diagnosis
E78.00	Pure hypercholesterolemia, unspecified	ICD-10-CM	Diagnosis
E78.01	Familial hypercholesterolemia	ICD-10-CM	Diagnosis
E78.2	Mixed hyperlipidemia	ICD-10-CM	Diagnosis
Hypertension			
401	Essential hypertension	ICD-9-CM	Diagnosis
401.0	Essential hypertension, malignant	ICD-9-CM	Diagnosis
401.1	Essential hypertension, benign	ICD-9-CM	Diagnosis
401.9	Unspecified essential hypertension	ICD-9-CM	Diagnosis
402	Hypertensive heart disease	ICD-9-CM	Diagnosis
402.0	Malignant hypertensive heart disease	ICD-9-CM	Diagnosis
402.00	Malignant hypertensive heart disease without heart failure	ICD-9-CM	Diagnosis
402.01	Malignant hypertensive heart disease with heart failure	ICD-9-CM	Diagnosis
402.1	Benign hypertensive heart disease	ICD-9-CM	Diagnosis
402.10	Benign hypertensive heart disease without heart failure	ICD-9-CM	Diagnosis
402.11	Benign hypertensive heart disease with heart failure	ICD-9-CM	Diagnosis
402.9	Unspecified hypertensive heart disease	ICD-9-CM	Diagnosis
402.90	Unspecified hypertensive heart disease without heart failure	ICD-9-CM	Diagnosis
402.91	Hypertensive heart disease, unspecified, with heart failure	ICD-9-CM	Diagnosis
403	Hypertensive chronic kidney disease	ICD-9-CM	Diagnosis
403.0	Hypertensive chronic kidney disease, malignant	ICD-9-CM	Diagnosis
403.00	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
403.01	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
403.1	Hypertensive chronic kidney disease, benign	ICD-9-CM	Diagnosis
403.10	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
403.11	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
403.9	Hypertensive chronic kidney disease, unspecified	ICD-9-CM	Diagnosis
403.90	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
403.91	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404	Hypertensive heart and chronic kidney disease	ICD-9-CM	Diagnosis
404.0	Hypertensive heart and chronic kidney disease, malignant	ICD-9-CM	Diagnosis
404.00	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.01	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
404.02	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.03	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.1	Hypertensive heart and chronic kidney disease, benign	ICD-9-CM	Diagnosis
404.10	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.11	Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.12	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.13	Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.9	Hypertensive heart and chronic kidney disease, unspecified	ICD-9-CM	Diagnosis
404.90	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.91	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.92	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.93	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
405	Secondary hypertension	ICD-9-CM	Diagnosis
405.0	Secondary hypertension, malignant	ICD-9-CM	Diagnosis
405.01	Secondary renovascular hypertension, malignant	ICD-9-CM	Diagnosis
405.09	Other secondary hypertension, malignant	ICD-9-CM	Diagnosis
405.1	Secondary hypertension, benign	ICD-9-CM	Diagnosis
405.11	Secondary renovascular hypertension, benign	ICD-9-CM	Diagnosis
405.19	Other secondary hypertension, benign	ICD-9-CM	Diagnosis
405.9	Unspecified secondary hypertension, unspecified	ICD-9-CM	Diagnosis
405.91	Secondary renovascular hypertension, unspecified	ICD-9-CM	Diagnosis
405.99	Other secondary hypertension, unspecified	ICD-9-CM	Diagnosis
997.91	Hypertension	ICD-9-CM	Diagnosis
I10	Essential (primary) hypertension	ICD-10-CM	Diagnosis
I11.0	Hypertensive heart disease with heart failure	ICD-10-CM	Diagnosis
I11.9	Hypertensive heart disease without heart failure	ICD-10-CM	Diagnosis
I12.0	Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease	ICD-10-CM	Diagnosis
I12.9	Hypertensive chronic kidney disease with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM	Diagnosis
I13.0	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM	Diagnosis
I13.10	Hypertensive heart and chronic kidney disease without heart failure, with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM	Diagnosis
I13.11	Hypertensive heart and chronic kidney disease without heart failure, with stage 5 chronic kidney disease, or end stage renal disease	ICD-10-CM	Diagnosis
I13.2	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease	ICD-10-CM	Diagnosis
I15.0	Renovascular hypertension	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
I15.1	Hypertension secondary to other renal disorders	ICD-10-CM	Diagnosis
I15.2	Hypertension secondary to endocrine disorders	ICD-10-CM	Diagnosis
I15.8	Other secondary hypertension	ICD-10-CM	Diagnosis
I15.9	Secondary hypertension, unspecified	ICD-10-CM	Diagnosis
I16.0	Hypertensive urgency	ICD-10-CM	Diagnosis
I16.1	Hypertensive emergency	ICD-10-CM	Diagnosis
I16.9	Hypertensive crisis, unspecified	ICD-10-CM	Diagnosis
I97.3	Postprocedural hypertension	ICD-10-CM	Diagnosis
N26.2	Page kidney	ICD-10-CM	Diagnosis
Nicotine Dependency			
305.1	Nondependent tobacco use disorder	ICD-9-CM	Diagnosis
989.84	Toxic effect of tobacco	ICD-9-CM	Diagnosis
V1582	Personal history of tobacco use, presenting hazards to health	ICD-9-CM	Procedure
99406	Smoking and tobacco use cessation counseling visit; intermediate, greater than 3 minutes up to 10 minutes	CPT-4	Procedure
99407	Smoking and tobacco use cessation counseling visit; intensive, greater than 10 minutes	CPT-4	Procedure
C9801	Smoking and tobacco cessation counseling visit for the asymptomatic patient; intermediate, greater than 3 minutes, up to 10 minutes	HCPCS	Procedure
C9802	Smoking and tobacco cessation counseling visit for the asymptomatic patient; intensive, greater than 10 minutes	HCPCS	Procedure
D1320	tobacco counseling for the control and prevention of oral disease	HCPCS	Procedure
G0375	Smoking and tobacco use cessation counseling visit; intermediate, greater than 3 minutes up to 10 minutes	HCPCS	Procedure
G0376	Smoking and tobacco use cessation counseling visit; intensive, greater than 10 minutes	HCPCS	Procedure
G0436	Smoking and tobacco cessation counseling visit for the asymptomatic patient; intermediate, greater than 3 minutes, up to 10 minutes	HCPCS	Procedure
G0437	Smoking and tobacco cessation counseling visit for the asymptomatic patient; intensive, greater than 10 minutes	HCPCS	Procedure
G8093	Newly diagnosed chronic obstructive pulmonary disease (COPD) patient documented to have received smoking cessation intervention, within 3 months of diagnosis	HCPCS	Procedure
G8094	Newly diagnosed chronic obstructive pulmonary disease (COPD) patient not documented to have received smoking cessation intervention, within 3 months of diagnosis	HCPCS	Procedure
G8402	Tobacco (smoke) use cessation intervention, counseling	HCPCS	Procedure
G8403	Tobacco (smoke) use cessation intervention not counseled	HCPCS	Procedure
G8453	Tobacco use cessation intervention, counseling	HCPCS	Procedure
G8454	Tobacco use cessation intervention not counseled, reason not specified	HCPCS	Procedure
G8455	Current tobacco smoker	HCPCS	Procedure
G8690	Current tobacco smoker or current exposure to secondhand smoke	HCPCS	Procedure
G9016	Smoking cessation counseling, individual, in the absence of or in addition to any other evaluation and management service, per session (6-10 minutes) [demo project code only]	HCPCS	Procedure
G9276	Documentation that patient is a current tobacco user	HCPCS	Procedure

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Code	Description	Code Type	Code Category
G9458	Patient documented as tobacco user and received tobacco cessation intervention (must include at least one of the following: advice given to quit smoking or tobacco use, counseling on the benefits of quitting smoking or tobacco use, assistance with or referral to external smoking or tobacco cessation support programs, or current enrollment in smoking or tobacco use cessation program) if identified as a tobacco user	HCPCS	Procedure
F17.200	Nicotine dependence, unspecified, uncomplicated	ICD-10-CM	Diagnosis
F17.201	Nicotine dependence, unspecified, in remission	ICD-10-CM	Diagnosis
F17.210	Nicotine dependence, cigarettes, uncomplicated	ICD-10-CM	Diagnosis
F17.211	Nicotine dependence, cigarettes, in remission	ICD-10-CM	Diagnosis
F17.220	Nicotine dependence, chewing tobacco, uncomplicated	ICD-10-CM	Diagnosis
F17.221	Nicotine dependence, chewing tobacco, in remission	ICD-10-CM	Diagnosis
F17.290	Nicotine dependence, other tobacco product, uncomplicated	ICD-10-CM	Diagnosis
F17.291	Nicotine dependence, other tobacco product, in remission	ICD-10-CM	Diagnosis
T65.211A	Toxic effect of chewing tobacco, accidental (unintentional), initial encounter	ICD-10-CM	Diagnosis
T65.212A	Toxic effect of chewing tobacco, intentional self-harm, initial encounter	ICD-10-CM	Diagnosis
T65.213A	Toxic effect of chewing tobacco, assault, initial encounter	ICD-10-CM	Diagnosis
T65.214A	Toxic effect of chewing tobacco, undetermined, initial encounter	ICD-10-CM	Diagnosis
T65.221A	Toxic effect of tobacco cigarettes, accidental (unintentional), initial encounter	ICD-10-CM	Diagnosis
T65.222A	Toxic effect of tobacco cigarettes, intentional self-harm, initial encounter	ICD-10-CM	Diagnosis
T65.223A	Toxic effect of tobacco cigarettes, assault, initial encounter	ICD-10-CM	Diagnosis
T65.224A	Toxic effect of tobacco cigarettes, undetermined, initial encounter	ICD-10-CM	Diagnosis
T65.291A	Toxic effect of other tobacco and nicotine, accidental (unintentional), initial encounter	ICD-10-CM	Diagnosis
T65.292A	Toxic effect of other tobacco and nicotine, intentional self-harm, initial encounter	ICD-10-CM	Diagnosis
T65.293A	Toxic effect of other tobacco and nicotine, assault, initial encounter	ICD-10-CM	Diagnosis
T65.294A	Toxic effect of other tobacco and nicotine, undetermined, initial encounter	ICD-10-CM	Diagnosis
Z87.891	Personal history of nicotine dependence	ICD-10-CM	Diagnosis
G8456	Current smokeless tobacco user	HCPCS	Procedure
G8688	Currently a smokeless tobacco user (e.g., chew, snuff) and no exposure to secondhand smoke	HCPCS	Procedure
G8692	Current smokeless tobacco user (e.g., chew, snuff) and no exposure to secondhand smoke	HCPCS	Procedure
Obesity			
278.0	Overweight and obesity	ICD-9-CM	Diagnosis
278.00	Obesity, unspecified	ICD-9-CM	Diagnosis
278.01	Morbid obesity	ICD-9-CM	Diagnosis
278.02	Overweight	ICD-9-CM	Diagnosis
278.1	Localized adiposity	ICD-9-CM	Diagnosis
V4586	Bariatric surgery status	ICD-9-CM	Procedure
V853	Body Mass Index between 30-39, adult	ICD-9-CM	Procedure
V8530	Body Mass Index 30.0-30.9, adult	ICD-9-CM	Procedure
V8531	Body Mass Index 31.0-31.9, adult	ICD-9-CM	Procedure
V8532	Body Mass Index 32.0-32.9, adult	ICD-9-CM	Procedure
V8533	Body Mass Index 33.0-33.9, adult	ICD-9-CM	Procedure
V8534	Body Mass Index 34.0-34.9, adult	ICD-9-CM	Procedure
V8535	Body Mass Index 35.0-35.9, adult	ICD-9-CM	Procedure

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Code	Description	Code Type	Code Category
V8536	Body Mass Index 36.0-36.9, adult	ICD-9-CM	Procedure
V8537	Body Mass Index 37.0-37.9, adult	ICD-9-CM	Procedure
V8538	Body Mass Index 38.0-38.9, adult	ICD-9-CM	Procedure
V8539	Body Mass Index 39.0-39.9, adult	ICD-9-CM	Procedure
V854	Body Mass Index 40 and over, adult	ICD-9-CM	Procedure
44.31	High gastric bypass	ICD-9-CM	Procedure
44.68	Laparoscopic gastroplasty	ICD-9-CM	Procedure
44.95	Laparoscopic gastric restrictive procedure	ICD-9-CM	Procedure
E65	Localized adiposity	ICD-10-CM	Diagnosis
E66.01	Morbid (severe) obesity due to excess calories	ICD-10-CM	Diagnosis
E66.09	Other obesity due to excess calories	ICD-10-CM	Diagnosis
E66.1	Drug-induced obesity	ICD-10-CM	Diagnosis
E66.3	Overweight	ICD-10-CM	Diagnosis
E66.8	Other obesity	ICD-10-CM	Diagnosis
E66.9	Obesity, unspecified	ICD-10-CM	Diagnosis
Z68.30	Body mass index (BMI) 30.0-30.9, adult	ICD-10-CM	Diagnosis
Z68.31	Body mass index (BMI) 31.0-31.9, adult	ICD-10-CM	Diagnosis
Z68.32	Body mass index (BMI) 32.0-32.9, adult	ICD-10-CM	Diagnosis
Z68.33	Body mass index (BMI) 33.0-33.9, adult	ICD-10-CM	Diagnosis
Z68.34	Body mass index (BMI) 34.0-34.9, adult	ICD-10-CM	Diagnosis
Z68.35	Body mass index (BMI) 35.0-35.9, adult	ICD-10-CM	Diagnosis
Z68.36	Body mass index (BMI) 36.0-36.9, adult	ICD-10-CM	Diagnosis
Z68.37	Body mass index (BMI) 37.0-37.9, adult	ICD-10-CM	Diagnosis
Z68.38	Body mass index (BMI) 38.0-38.9, adult	ICD-10-CM	Diagnosis
Z68.39	Body mass index (BMI) 39.0-39.9, adult	ICD-10-CM	Diagnosis
Z98.84	Bariatric surgery status	ICD-10-CM	Diagnosis
0D1607A	Bypass Stomach to Jejunum with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0D160JA	Bypass Stomach to Jejunum with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0D160KA	Bypass Stomach to Jejunum with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0D160ZA	Bypass Stomach to Jejunum, Open Approach	ICD-10-PCS	Procedure
0D1687A	Bypass Stomach to Jejunum with Autologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic	ICD-10-PCS	Procedure
0D168JA	Bypass Stomach to Jejunum with Synthetic Substitute, Via Natural or Artificial Opening Endoscopic	ICD-10-PCS	Procedure
0D168KA	Bypass Stomach to Jejunum with Nonautologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic	ICD-10-PCS	Procedure
0D168ZA	Bypass Stomach to Jejunum, Via Natural or Artificial Opening Endoscopic	ICD-10-PCS	Procedure
0DQ64ZZ	Repair Stomach, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0DV64CZ	Restriction of Stomach with Extraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
Other Ischemic Heart Disease			
411	Other acute and subacute forms of ischemic heart disease	ICD-9-CM	Diagnosis
411.0	Postmyocardial infarction syndrome	ICD-9-CM	Diagnosis
411.1	Intermediate coronary syndrome	ICD-9-CM	Diagnosis
411.8	Other acute and subacute forms of ischemic heart disease	ICD-9-CM	Diagnosis
411.81	Acute coronary occlusion without myocardial infarction	ICD-9-CM	Diagnosis
411.89	Other acute and subacute form of ischemic heart disease	ICD-9-CM	Diagnosis
413	Angina pectoris	ICD-9-CM	Diagnosis
413.0	Angina decubitus	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
413.1	Prinzmetal angina	ICD-9-CM	Diagnosis
413.9	Other and unspecified angina pectoris	ICD-9-CM	Diagnosis
414	Other forms of chronic ischemic heart disease	ICD-9-CM	Diagnosis
414.0	Coronary atherosclerosis	ICD-9-CM	Diagnosis
414.00	Coronary atherosclerosis of unspecified type of vessel, native or graft	ICD-9-CM	Diagnosis
414.01	Coronary atherosclerosis of native coronary artery	ICD-9-CM	Diagnosis
414.02	Coronary atherosclerosis of autologous vein bypass graft	ICD-9-CM	Diagnosis
414.03	Coronary atherosclerosis of nonautologous biological bypass graft	ICD-9-CM	Diagnosis
414.04	Coronary atherosclerosis of artery bypass graft	ICD-9-CM	Diagnosis
414.05	Coronary atherosclerosis of unspecified type of bypass graft	ICD-9-CM	Diagnosis
414.06	Coronary atherosclerosis, of native coronary artery of transplanted heart	ICD-9-CM	Diagnosis
414.07	Coronary atherosclerosis, of bypass graft (artery) (vein) of transplanted heart	ICD-9-CM	Diagnosis
414.1	Aneurysm and dissection of heart	ICD-9-CM	Diagnosis
414.10	Aneurysm of heart	ICD-9-CM	Diagnosis
414.11	Aneurysm of coronary vessels	ICD-9-CM	Diagnosis
414.12	Dissection of coronary artery	ICD-9-CM	Diagnosis
414.19	Other aneurysm of heart	ICD-9-CM	Diagnosis
414.2	Chronic total occlusion of coronary artery	ICD-9-CM	Diagnosis
414.3	Coronary atherosclerosis due to lipid rich plaque	ICD-9-CM	Diagnosis
414.4	Coronary atherosclerosis due to calcified coronary lesion	ICD-9-CM	Diagnosis
414.8	Other specified forms of chronic ischemic heart disease	ICD-9-CM	Diagnosis
414.9	Unspecified chronic ischemic heart disease	ICD-9-CM	Diagnosis
429.2	Unspecified cardiovascular disease	ICD-9-CM	Diagnosis
429.5	Rupture of chordae tendineae	ICD-9-CM	Diagnosis
429.6	Rupture of papillary muscle	ICD-9-CM	Diagnosis
429.7	Certain sequelae of myocardial infarction, not elsewhere classified	ICD-9-CM	Diagnosis
429.71	Acquired cardiac septal defect	ICD-9-CM	Diagnosis
429.79	Other certain sequelae of myocardial infarction, not elsewhere classified	ICD-9-CM	Diagnosis
429.9	Unspecified heart disease	ICD-9-CM	Diagnosis
G8033	Prior myocardial infarction, coronary artery disease patient documented to be on beta-blocker therapy	HCPCS	Procedure
G8034	Prior myocardial infarction, coronary artery disease patient not documented to be on beta-blocker therapy	HCPCS	Procedure
G8035	Clinician documented that prior myocardial infarction, coronary artery disease patient was not eligible candidate for beta-blocker therapy measure	HCPCS	Procedure
G8036	Coronary artery disease patient documented to be on antiplatelet therapy	HCPCS	Procedure
G8037	Coronary artery disease patient not documented to be on antiplatelet therapy	HCPCS	Procedure
G8038	Clinician documented that coronary artery disease patient was not eligible candidate for antiplatelet therapy measure	HCPCS	Procedure
G8039	Coronary artery disease patient with low-density lipoprotein documented to be greater than 100 mg/dl	HCPCS	Procedure
G8040	Coronary artery disease patient with low-density lipoprotein documented to be less than or equal to 100 mg/dl	HCPCS	Procedure
G8041	Clinician documented that coronary artery disease patient was not eligible candidate for low-density lipoprotein measure	HCPCS	Procedure
I20.0	Unstable angina	ICD-10-CM	Diagnosis
I20.1	Angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I20.8	Other forms of angina pectoris	ICD-10-CM	Diagnosis
I20.9	Angina pectoris, unspecified	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
I23.0	Hemopericardium as current complication following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.1	Atrial septal defect as current complication following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.2	Ventricular septal defect as current complication following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.3	Rupture of cardiac wall without hemopericardium as current complication following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.4	Rupture of chordae tendineae as current complication following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.5	Rupture of papillary muscle as current complication following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.6	Thrombosis of atrium, auricular appendage, and ventricle as current complications following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.7	Postinfarction angina	ICD-10-CM	Diagnosis
I23.8	Other current complications following acute myocardial infarction	ICD-10-CM	Diagnosis
I24.0	Acute coronary thrombosis not resulting in myocardial infarction	ICD-10-CM	Diagnosis
I24.1	Dressler's syndrome	ICD-10-CM	Diagnosis
I24.8	Other forms of acute ischemic heart disease	ICD-10-CM	Diagnosis
I24.9	Acute ischemic heart disease, unspecified	ICD-10-CM	Diagnosis
I25.10	Atherosclerotic heart disease of native coronary artery without angina pectoris	ICD-10-CM	Diagnosis
I25.110	Atherosclerotic heart disease of native coronary artery with unstable angina pectoris	ICD-10-CM	Diagnosis
I25.111	Atherosclerotic heart disease of native coronary artery with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.118	Atherosclerotic heart disease of native coronary artery with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.119	Atherosclerotic heart disease of native coronary artery with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.3	Aneurysm of heart	ICD-10-CM	Diagnosis
I25.41	Coronary artery aneurysm	ICD-10-CM	Diagnosis
I25.42	Coronary artery dissection	ICD-10-CM	Diagnosis
I25.5	Ischemic cardiomyopathy	ICD-10-CM	Diagnosis
I25.6	Silent myocardial ischemia	ICD-10-CM	Diagnosis
I25.700	Atherosclerosis of coronary artery bypass graft(s), unspecified, with unstable angina pectoris	ICD-10-CM	Diagnosis
I25.701	Atherosclerosis of coronary artery bypass graft(s), unspecified, with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.708	Atherosclerosis of coronary artery bypass graft(s), unspecified, with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.709	Atherosclerosis of coronary artery bypass graft(s), unspecified, with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.710	Atherosclerosis of autologous vein coronary artery bypass graft(s) with unstable angina pectoris	ICD-10-CM	Diagnosis
I25.711	Atherosclerosis of autologous vein coronary artery bypass graft(s) with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.718	Atherosclerosis of autologous vein coronary artery bypass graft(s) with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.719	Atherosclerosis of autologous vein coronary artery bypass graft(s) with unspecified angina pectoris	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
I25.720	Atherosclerosis of autologous artery coronary artery bypass graft(s) with unstable angina pectoris	ICD-10-CM	Diagnosis
I25.721	Atherosclerosis of autologous artery coronary artery bypass graft(s) with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.728	Atherosclerosis of autologous artery coronary artery bypass graft(s) with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.729	Atherosclerosis of autologous artery coronary artery bypass graft(s) with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.730	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with unstable angina pectoris	ICD-10-CM	Diagnosis
I25.731	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.738	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.739	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.750	Atherosclerosis of native coronary artery of transplanted heart with unstable angina	ICD-10-CM	Diagnosis
I25.751	Atherosclerosis of native coronary artery of transplanted heart with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.758	Atherosclerosis of native coronary artery of transplanted heart with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.759	Atherosclerosis of native coronary artery of transplanted heart with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.760	Atherosclerosis of bypass graft of coronary artery of transplanted heart with unstable angina	ICD-10-CM	Diagnosis
I25.761	Atherosclerosis of bypass graft of coronary artery of transplanted heart with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.768	Atherosclerosis of bypass graft of coronary artery of transplanted heart with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.769	Atherosclerosis of bypass graft of coronary artery of transplanted heart with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.790	Atherosclerosis of other coronary artery bypass graft(s) with unstable angina pectoris	ICD-10-CM	Diagnosis
I25.791	Atherosclerosis of other coronary artery bypass graft(s) with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.798	Atherosclerosis of other coronary artery bypass graft(s) with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.799	Atherosclerosis of other coronary artery bypass graft(s) with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.810	Atherosclerosis of coronary artery bypass graft(s) without angina pectoris	ICD-10-CM	Diagnosis
I25.811	Atherosclerosis of native coronary artery of transplanted heart without angina pectoris	ICD-10-CM	Diagnosis
I25.812	Atherosclerosis of bypass graft of coronary artery of transplanted heart without angina pectoris	ICD-10-CM	Diagnosis
I25.82	Chronic total occlusion of coronary artery	ICD-10-CM	Diagnosis
I25.83	Coronary atherosclerosis due to lipid rich plaque	ICD-10-CM	Diagnosis
I25.84	Coronary atherosclerosis due to calcified coronary lesion	ICD-10-CM	Diagnosis
I25.89	Other forms of chronic ischemic heart disease	ICD-10-CM	Diagnosis
I25.9	Chronic ischemic heart disease, unspecified	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
I51.0	Cardiac septal defect, acquired	ICD-10-CM	Diagnosis
I51.1	Rupture of chordae tendineae, not elsewhere classified	ICD-10-CM	Diagnosis
I51.2	Rupture of papillary muscle, not elsewhere classified	ICD-10-CM	Diagnosis
I51.9	Heart disease, unspecified	ICD-10-CM	Diagnosis
I52	Other heart disorders in diseases classified elsewhere	ICD-10-CM	Diagnosis
Other Medical Conditions			
E880	Accidental fall on or from stairs or steps	ICD-9-CM	Procedure
E8800	Accidental fall on or from escalator	ICD-9-CM	Procedure
E8801	Accidental fall on or from sidewalk curb	ICD-9-CM	Procedure
E8809	Accidental fall on or from other stairs or steps	ICD-9-CM	Procedure
E881	Accidental fall on or from ladders or scaffolding	ICD-9-CM	Procedure
E8810	Accidental fall from ladder	ICD-9-CM	Procedure
E8811	Accidental fall from scaffolding	ICD-9-CM	Procedure
E882	Accidental fall from or out of building or other structure	ICD-9-CM	Procedure
E883	Accidental fall into hole or other opening in surface	ICD-9-CM	Procedure
E8830	Accident from diving or jumping into water (swimming pool)	ICD-9-CM	Procedure
E8831	Accidental fall into well	ICD-9-CM	Procedure
E8832	Accidental fall into storm drain or manhole	ICD-9-CM	Procedure
E8839	Accidental fall into other hole or other opening in surface	ICD-9-CM	Procedure
E884	Other accidental fall from one level to another	ICD-9-CM	Procedure
E8840	Accidental fall from playground equipment	ICD-9-CM	Procedure
E8841	Accidental fall from cliff	ICD-9-CM	Procedure
E8842	Accidental fall from chair	ICD-9-CM	Procedure
E8843	Accidental fall from wheelchair	ICD-9-CM	Procedure
E8844	Accidental fall from bed	ICD-9-CM	Procedure
E8845	Accidental fall from other furniture	ICD-9-CM	Procedure
E8846	Accidental fall from commode	ICD-9-CM	Procedure
E8849	Other accidental fall from one level to another	ICD-9-CM	Procedure
E885	Accidental fall on same level from slipping, tripping, or stumbling	ICD-9-CM	Procedure
E8850	Fall on same level from (nonmotorized) scooter	ICD-9-CM	Procedure
E8851	Fall from roller skates	ICD-9-CM	Procedure
E8852	Fall from skateboard	ICD-9-CM	Procedure
E8853	Fall from skis	ICD-9-CM	Procedure
E8854	Fall from snowboard	ICD-9-CM	Procedure
E8859	Fall from other slipping, tripping, or stumbling	ICD-9-CM	Procedure
E886	Accidental fall on same level from collision, pushing, or shoving, by or with other person	ICD-9-CM	Procedure
E8860	Accidental fall on same level from collision, pushing, or shoving, by or with other person in sports	ICD-9-CM	Procedure
E8869	Other and unspecified accidental falls on same level from collision, pushing, or shoving, by or with other person	ICD-9-CM	Procedure
E887	Fracture in accidental fall, cause unspecified	ICD-9-CM	Procedure
E888	Other and unspecified accidental fall	ICD-9-CM	Procedure
E8880	Fall resulting in striking against sharp object	ICD-9-CM	Procedure
E8881	Fall resulting in striking against other object	ICD-9-CM	Procedure
E8888	Other fall	ICD-9-CM	Procedure
E8889	Unspecified fall	ICD-9-CM	Procedure
E9176	Strike against or struck accidentally by crowd, by collective fear or panic with subsequent fall	ICD-9-CM	Procedure

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Code	Description	Code Type	Code Category
E9177	Strike against or struck accidentally by furniture with subsequent fall	ICD-9-CM	Procedure
E9178	Strike against or struck accidentally by other stationary object with subsequent fall	ICD-9-CM	Procedure
E9179	Other accident caused by striking against or being struck accidentally by objects or persons	ICD-9-CM	Procedure
E9293	Late effects of accidental fall	ICD-9-CM	Procedure
807.0	Closed fracture of rib(s)	ICD-9-CM	Diagnosis
807.00	Closed fracture of rib(s), unspecified	ICD-9-CM	Diagnosis
807.01	Closed fracture of one rib	ICD-9-CM	Diagnosis
807.02	Closed fracture of two ribs	ICD-9-CM	Diagnosis
807.03	Closed fracture of three ribs	ICD-9-CM	Diagnosis
807.04	Closed fracture of four ribs	ICD-9-CM	Diagnosis
807.05	Closed fracture of five ribs	ICD-9-CM	Diagnosis
807.06	Closed fracture of six ribs	ICD-9-CM	Diagnosis
807.07	Closed fracture of seven ribs	ICD-9-CM	Diagnosis
807.08	Closed fracture of eight or more ribs	ICD-9-CM	Diagnosis
807.09	Closed fracture of multiple ribs, unspecified	ICD-9-CM	Diagnosis
807.1	Open fracture of rib(s)	ICD-9-CM	Diagnosis
807.10	Open fracture of rib(s), unspecified	ICD-9-CM	Diagnosis
807.11	Open fracture of one rib	ICD-9-CM	Diagnosis
807.12	Open fracture of two ribs	ICD-9-CM	Diagnosis
807.13	Open fracture of three ribs	ICD-9-CM	Diagnosis
807.14	Open fracture of four ribs	ICD-9-CM	Diagnosis
807.15	Open fracture of five ribs	ICD-9-CM	Diagnosis
807.16	Open fracture of six ribs	ICD-9-CM	Diagnosis
807.17	Open fracture of seven ribs	ICD-9-CM	Diagnosis
807.18	Open fracture of eight or more ribs	ICD-9-CM	Diagnosis
807.19	Open fracture of multiple ribs, unspecified	ICD-9-CM	Diagnosis
810	Fracture of clavicle	ICD-9-CM	Diagnosis
810.0	Closed fracture of clavicle	ICD-9-CM	Diagnosis
810.00	Unspecified part of closed fracture of clavicle	ICD-9-CM	Diagnosis
810.01	Closed fracture of sternal end of clavicle	ICD-9-CM	Diagnosis
810.02	Closed fracture of shaft of clavicle	ICD-9-CM	Diagnosis
810.03	Closed fracture of acromial end of clavicle	ICD-9-CM	Diagnosis
810.1	Open fracture of clavicle	ICD-9-CM	Diagnosis
810.10	Unspecified part of open fracture of clavicle	ICD-9-CM	Diagnosis
810.11	Open fracture of sternal end of clavicle	ICD-9-CM	Diagnosis
810.12	Open fracture of shaft of clavicle	ICD-9-CM	Diagnosis
810.13	Open fracture of acromial end of clavicle	ICD-9-CM	Diagnosis
813	Fracture of radius and ulna	ICD-9-CM	Diagnosis
813.0	Closed fracture of upper end of radius and ulna	ICD-9-CM	Diagnosis
813.00	Unspecified fracture of radius and ulna, upper end of forearm, closed	ICD-9-CM	Diagnosis
813.01	Closed fracture of olecranon process of ulna	ICD-9-CM	Diagnosis
813.02	Closed fracture of coronoid process of ulna	ICD-9-CM	Diagnosis
813.03	Closed Monteggia's fracture	ICD-9-CM	Diagnosis
813.04	Other and unspecified closed fractures of proximal end of ulna (alone)	ICD-9-CM	Diagnosis
813.05	Closed fracture of head of radius	ICD-9-CM	Diagnosis
813.06	Closed fracture of neck of radius	ICD-9-CM	Diagnosis
813.07	Other and unspecified closed fractures of proximal end of radius (alone)	ICD-9-CM	Diagnosis
813.08	Closed fracture of radius with ulna, upper end (any part)	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
813.1	Open fracture of upper end of radius and ulna	ICD-9-CM	Diagnosis
813.10	Unspecified open fracture of upper end of forearm	ICD-9-CM	Diagnosis
813.11	Open fracture of olecranon process of ulna	ICD-9-CM	Diagnosis
813.12	Open fracture of coronoid process of ulna	ICD-9-CM	Diagnosis
813.13	Open Monteggia's fracture	ICD-9-CM	Diagnosis
813.14	Other and unspecified open fractures of proximal end of ulna (alone)	ICD-9-CM	Diagnosis
813.15	Open fracture of head of radius	ICD-9-CM	Diagnosis
813.16	Open fracture of neck of radius	ICD-9-CM	Diagnosis
813.17	Other and unspecified open fractures of proximal end of radius (alone)	ICD-9-CM	Diagnosis
813.18	Open fracture of radius with ulna, upper end (any part)	ICD-9-CM	Diagnosis
813.2	Closed fracture of shaft of radius and ulna	ICD-9-CM	Diagnosis
813.20	Unspecified closed fracture of shaft of radius or ulna	ICD-9-CM	Diagnosis
813.21	Closed fracture of shaft of radius (alone)	ICD-9-CM	Diagnosis
813.22	Closed fracture of shaft of ulna (alone)	ICD-9-CM	Diagnosis
813.23	Closed fracture of shaft of radius with ulna	ICD-9-CM	Diagnosis
813.3	Open fracture of shaft of radius and ulna	ICD-9-CM	Diagnosis
813.30	Unspecified open fracture of shaft of radius or ulna	ICD-9-CM	Diagnosis
813.31	Open fracture of shaft of radius (alone)	ICD-9-CM	Diagnosis
813.32	Open fracture of shaft of ulna (alone)	ICD-9-CM	Diagnosis
813.33	Open fracture of shaft of radius with ulna	ICD-9-CM	Diagnosis
813.4	Closed fracture of lower end of radius and ulna	ICD-9-CM	Diagnosis
813.40	Unspecified closed fracture of lower end of forearm	ICD-9-CM	Diagnosis
813.41	Closed Colles' fracture	ICD-9-CM	Diagnosis
813.42	Other closed fractures of distal end of radius (alone)	ICD-9-CM	Diagnosis
813.43	Closed fracture of distal end of ulna (alone)	ICD-9-CM	Diagnosis
813.44	Closed fracture of lower end of radius with ulna	ICD-9-CM	Diagnosis
813.45	Torus fracture of radius (alone)	ICD-9-CM	Diagnosis
813.46	Torus fracture of ulna (alone)	ICD-9-CM	Diagnosis
813.47	Torus fracture of radius and ulna	ICD-9-CM	Diagnosis
813.5	Open fracture of lower end of radius and ulna	ICD-9-CM	Diagnosis
813.50	Unspecified open fracture of lower end of forearm	ICD-9-CM	Diagnosis
813.51	Open Colles' fracture	ICD-9-CM	Diagnosis
813.52	Other open fractures of distal end of radius (alone)	ICD-9-CM	Diagnosis
813.53	Open fracture of distal end of ulna (alone)	ICD-9-CM	Diagnosis
813.54	Open fracture of lower end of radius with ulna	ICD-9-CM	Diagnosis
813.8	Closed fracture of unspecified part of radius with ulna	ICD-9-CM	Diagnosis
813.80	Closed fracture of unspecified part of forearm	ICD-9-CM	Diagnosis
813.81	Closed fracture of unspecified part of radius (alone)	ICD-9-CM	Diagnosis
813.82	Closed fracture of unspecified part of ulna (alone)	ICD-9-CM	Diagnosis
813.83	Closed fracture of unspecified part of radius with ulna	ICD-9-CM	Diagnosis
813.9	Open fracture of unspecified part of radius with ulna	ICD-9-CM	Diagnosis
813.90	Open fracture of unspecified part of forearm	ICD-9-CM	Diagnosis
813.91	Open fracture of unspecified part of radius (alone)	ICD-9-CM	Diagnosis
813.92	Open fracture of unspecified part of ulna (alone)	ICD-9-CM	Diagnosis
813.93	Open fracture of unspecified part of radius with ulna	ICD-9-CM	Diagnosis
820	Fracture of neck of femur	ICD-9-CM	Diagnosis
820.0	Closed transcervical fracture	ICD-9-CM	Diagnosis
820.00	Closed fracture of unspecified intracapsular section of neck of femur	ICD-9-CM	Diagnosis
820.01	Closed fracture of epiphysis (separation) (upper) of neck of femur	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
820.02	Closed fracture of midcervical section of femur	ICD-9-CM	Diagnosis
820.03	Closed fracture of base of neck of femur	ICD-9-CM	Diagnosis
820.09	Other closed transcervical fracture of femur	ICD-9-CM	Diagnosis
820.1	Open transcervical fracture	ICD-9-CM	Diagnosis
820.10	Open fracture of unspecified intracapsular section of neck of femur	ICD-9-CM	Diagnosis
820.11	Open fracture of epiphysis (separation) (upper) of neck of femur	ICD-9-CM	Diagnosis
820.12	Open fracture of midcervical section of femur	ICD-9-CM	Diagnosis
820.13	Open fracture of base of neck of femur	ICD-9-CM	Diagnosis
820.19	Other open transcervical fracture of femur	ICD-9-CM	Diagnosis
820.2	Closed pertrochanteric fracture of femur	ICD-9-CM	Diagnosis
820.20	Closed fracture of unspecified trochanteric section of femur	ICD-9-CM	Diagnosis
820.21	Closed fracture of intertrochanteric section of femur	ICD-9-CM	Diagnosis
820.22	Closed fracture of subtrochanteric section of femur	ICD-9-CM	Diagnosis
820.3	Open pertrochanteric fracture of femur	ICD-9-CM	Diagnosis
820.30	Open fracture of unspecified trochanteric section of femur	ICD-9-CM	Diagnosis
820.31	Open fracture of intertrochanteric section of femur	ICD-9-CM	Diagnosis
820.32	Open fracture of subtrochanteric section of femur	ICD-9-CM	Diagnosis
820.8	Closed fracture of unspecified part of neck of femur	ICD-9-CM	Diagnosis
820.9	Open fracture of unspecified part of neck of femur	ICD-9-CM	Diagnosis
78.11	Application of external fixator device, scapula, clavicle, and thorax [ribs and sternum]	ICD-9-CM	Procedure
78.13	Application of external fixator device, radius and ulna	ICD-9-CM	Procedure
78.15	Application of external fixator device, femur	ICD-9-CM	Procedure
78.41	Other repair or plastic operations on scapula, clavicle, and thorax (ribs and sternum)	ICD-9-CM	Procedure
78.43	Other repair or plastic operations on radius and ulna	ICD-9-CM	Procedure
78.45	Other repair or plastic operations on femur	ICD-9-CM	Procedure
78.51	Internal fixation of scapula, clavicle, and thorax (ribs and sternum) without fracture reduction	ICD-9-CM	Procedure
78.53	Internal fixation of radius and ulna without fracture reduction	ICD-9-CM	Procedure
78.55	Internal fixation of femur without fracture reduction	ICD-9-CM	Procedure
78.61	Removal of implanted device from scapula, clavicle, and thorax (ribs and sternum)	ICD-9-CM	Procedure
78.63	Removal of implanted device from radius and ulna	ICD-9-CM	Procedure
78.65	Removal of implanted device from femur	ICD-9-CM	Procedure
79.02	Closed reduction of fracture of radius and ulna without internal fixation	ICD-9-CM	Procedure
79.05	Closed reduction of fracture of femur without internal fixation	ICD-9-CM	Procedure
79.12	Closed reduction of fracture of radius and ulna with internal fixation	ICD-9-CM	Procedure
79.15	Closed reduction of fracture of femur with internal fixation	ICD-9-CM	Procedure
79.22	Open reduction of fracture of radius and ulna without internal fixation	ICD-9-CM	Procedure
79.25	Open reduction of fracture of femur without internal fixation	ICD-9-CM	Procedure
79.32	Open reduction of fracture of radius and ulna with internal fixation	ICD-9-CM	Procedure
79.35	Open reduction of fracture of femur with internal fixation	ICD-9-CM	Procedure
79.62	Debridement of open fracture of radius and ulna	ICD-9-CM	Procedure
79.65	Debridement of open fracture of femur	ICD-9-CM	Procedure
21800	Closed treatment of broken rib	CPT-4	Procedure
21805	Open treatment of broken rib	CPT-4	Procedure
21810	Treatment of broken rib	CPT-4	Procedure
21812	Open treatment of broken ribs with insertion of hardware	CPT-4	Procedure
21813	Open treatment of broken ribs with insertion of hardware	CPT-4	Procedure

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Code	Description	Code Type	Code Category
23485	Incision to repair collar bone for nonunion of fracture with bone graft	CPT-4	Procedure
23500	Closed treatment of collar bone fracture	CPT-4	Procedure
23505	Closed treatment of collar bone broken with manipulation	CPT-4	Procedure
23515	Open treatment of collar bone broken	CPT-4	Procedure
24586	Open treatment of broken and/or dislocated upper or lower arm bones at elbow	CPT-4	Procedure
24587	Open treatment of broken and/or dislocated upper or lower arm bones at elbow with implant	CPT-4	Procedure
24620	Closed treatment of broken and dislocated forearm bones at elbow with manipulation	CPT-4	Procedure
24635	Open treatment of broken and dislocated forearm bones at elbow	CPT-4	Procedure
24650	Closed treatment of broken forearm bone at elbow	CPT-4	Procedure
24655	Closed treatment of broken forearm bone at elbow with manipulation	CPT-4	Procedure
24665	Open treatment of broken forearm bone at elbow	CPT-4	Procedure
24666	Open treatment of broken forearm bone at elbow with prosthetic replacement	CPT-4	Procedure
24670	Closed treatment of broken forearm bone at elbow	CPT-4	Procedure
24675	Closed treatment of broken forearm bone at elbow with manipulation	CPT-4	Procedure
24685	Open treatment of broken forearm bone at elbow	CPT-4	Procedure
25500	Closed treatment of broken forearm bone	CPT-4	Procedure
25505	Closed treatment of broken forearm bone with manipulation	CPT-4	Procedure
25515	Open treatment of broken forearm bone	CPT-4	Procedure
25520	Closed treatment of broken forearm and dislocated wrist bones	CPT-4	Procedure
25525	Open treatment of broken forearm bone and closed treatment of joint dislocation	CPT-4	Procedure
25526	Open treatment of broken forearm bone	CPT-4	Procedure
25530	Closed treatment of broken forearm bone	CPT-4	Procedure
25535	Closed treatment of broken forearm bone with manipulation	CPT-4	Procedure
25545	Open treatment of broken forearm bone	CPT-4	Procedure
25560	Closed treatment of broken forearm bones	CPT-4	Procedure
25565	Closed treatment of broken forearm bones with manipulation	CPT-4	Procedure
25574	Open treatment of broken forearm bones	CPT-4	Procedure
25575	Open treatment of broken forearm bones	CPT-4	Procedure
25600	Closed treatment of broken forearm bones	CPT-4	Procedure
25605	Closed treatment of broken or growth plate separate of forearm bone at wrist with manipulation	CPT-4	Procedure
25606	Insertion of hardware to lower forearm bone broken or growth plate separation, accessed through the skin	CPT-4	Procedure
25607	Open treatment of broken or lower forearm bone or growth plate separation with insertion of hardware	CPT-4	Procedure
25608	Open treatment of broken of lower forearm or growth plate separation with insertion of hardware of 2 fragments	CPT-4	Procedure
25609	Open treatment of broken of lower forearm or growth plate separation with insertion of hardware of 3 or more fragments	CPT-4	Procedure
25611	Percutaneous skeletal fixation of distal radial fracture (eg, colles or smith type) or epiphyseal separation, with or without fracture of ulnar styloid, requiring manipulation, with or without external fixation	CPT-4	Procedure

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Code	Description	Code Type	Code Category
25620	Open treatment of distal radial fracture (eg, colles or smith type) or epiphyseal separation, with or without fracture of ulnar styloid, with or without internal or external fixation	CPT-4	Procedure
25650	Closed treatment of broken forearm bone at wrist bone	CPT-4	Procedure
25651	Insertion of hardware broken bone of forearm at wrist, accessed through the skin	CPT-4	Procedure
25652	Open treatment of broken wrist	CPT-4	Procedure
27230	Closed treatment of upper thigh bone fracture	CPT-4	Procedure
27232	Closed treatment of thigh bone fracture with manipulation	CPT-4	Procedure
27235	Insertion of hardware to broken thigh bone, accessed through the skin	CPT-4	Procedure
27236	Open treatment of broken thigh bone with insertion of hardware or prosthetic replacement	CPT-4	Procedure
27238	Closed treatment of fracture below neck of upper thigh bone	CPT-4	Procedure
27240	Closed treatment of broken thigh bone with manipulation	CPT-4	Procedure
27244	Surgical treatment of broken thigh bone	CPT-4	Procedure
27245	Surgical treatment of broken thigh bone	CPT-4	Procedure
27246	Closed treatment of broken thigh bone	CPT-4	Procedure
27248	Open treatment of broken thigh bone	CPT-4	Procedure
27254	Open treatment of fracture and traumatic dislocation of hip socket and thigh bone	CPT-4	Procedure
27267	Closed treatment of broken thigh bone	CPT-4	Procedure
27268	Closed treatment of fracture of upper portion and head of thigh bone with manipulation	CPT-4	Procedure
27269	Open treatment of fracture of thigh bone	CPT-4	Procedure
27500	Closed treatment of thigh bone fracture	CPT-4	Procedure
27501	Closed treatment of broken thigh bone	CPT-4	Procedure
27502	Closed treatment of broken thigh bone with manipulation	CPT-4	Procedure
27503	Closed treatment of broken thigh bone with manipulation	CPT-4	Procedure
27506	Open treatment of broken thigh bone	CPT-4	Procedure
27507	Open treatment of broken thigh bone	CPT-4	Procedure
27508	Closed treatment of broken thigh bone	CPT-4	Procedure
27509	Insertion of hardware to stabilize broken thigh bone or separated growth plate, accessed through the skin	CPT-4	Procedure
27510	Closed treatment of broken thigh bone with manipulation	CPT-4	Procedure
27511	Open treatment of broken thigh bone	CPT-4	Procedure
27513	Open treatment of broken thigh bone	CPT-4	Procedure
27514	Open treatment of broken thigh bone	CPT-4	Procedure
E0130	Walker, rigid (pickup), adjustable or fixed height	HCPCS	Procedure
E0135	Walker, folding (pickup), adjustable or fixed height	HCPCS	Procedure
E0140	Walker, with trunk support, adjustable or fixed height, any type	HCPCS	Procedure
E0141	Walker, rigid, wheeled, adjustable or fixed height	HCPCS	Procedure
E0142	Rigid walker, wheeled, with seat	HCPCS	Procedure
E0143	Walker, folding, wheeled, adjustable or fixed height	HCPCS	Procedure
E0144	Walker, enclosed, 4 sided framed, rigid or folding, wheeled with posterior seat	HCPCS	Procedure
E0145	Walker, wheeled, with seat and crutch attachments	HCPCS	Procedure
E0146	Folding walker, wheeled, with seat	HCPCS	Procedure
E0147	Walker, heavy duty, multiple braking system, variable wheel resistance	HCPCS	Procedure
E0148	Walker, heavy-duty, without wheels, rigid or folding, any type, each	HCPCS	Procedure
E0149	Walker, heavy-duty, wheeled, rigid or folding, any type	HCPCS	Procedure
E0154	Platform attachment, walker, each	HCPCS	Procedure
E0155	Wheel attachment, rigid pick-up walker, per pair	HCPCS	Procedure

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Code	Description	Code Type	Code Category
E0156	Seat attachment, walker	HCPCS	Procedure
E0157	Crutch attachment, walker, each	HCPCS	Procedure
E0158	Leg extensions for walker, per set of 4	HCPCS	Procedure
E0159	Brake attachment for wheeled walker, replacement, each	HCPCS	Procedure
K0458	Heavy duty walker, without wheels, each	HCPCS	Procedure
K0459	Heavy duty wheeled walker, each	HCPCS	Procedure
L1520	Thkao, swivel walker	HCPCS	Procedure
780.2	Syncope and collapse	ICD-9-CM	Diagnosis
V00.01XA	Pedestrian on foot injured in collision with roller-skater, initial encounter	ICD-10-CM	Diagnosis
V00.01XD	Pedestrian on foot injured in collision with roller-skater, subsequent encounter	ICD-10-CM	Diagnosis
V00.02XA	Pedestrian on foot injured in collision with skateboarder, initial encounter	ICD-10-CM	Diagnosis
V00.02XD	Pedestrian on foot injured in collision with skateboarder, subsequent encounter	ICD-10-CM	Diagnosis
V00.09XA	Pedestrian on foot injured in collision with other pedestrian conveyance, initial encounter	ICD-10-CM	Diagnosis
V00.09XD	Pedestrian on foot injured in collision with other pedestrian conveyance, subsequent encounter	ICD-10-CM	Diagnosis
V00.111A	Fall from in-line roller-skates, initial encounter	ICD-10-CM	Diagnosis
V00.111D	Fall from in-line roller-skates, subsequent encounter	ICD-10-CM	Diagnosis
V00.111S	Fall from in-line roller-skates, sequela	ICD-10-CM	Diagnosis
V00.112A	In-line roller-skater colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.112D	In-line roller-skater colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.112S	In-line roller-skater colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.118A	Other in-line roller-skate accident, initial encounter	ICD-10-CM	Diagnosis
V00.118D	Other in-line roller-skate accident, subsequent encounter	ICD-10-CM	Diagnosis
V00.118S	Other in-line roller-skate accident, sequela	ICD-10-CM	Diagnosis
V00.121A	Fall from non-in-line roller-skates, initial encounter	ICD-10-CM	Diagnosis
V00.121D	Fall from non-in-line roller-skates, subsequent encounter	ICD-10-CM	Diagnosis
V00.121S	Fall from non-in-line roller-skates, sequela	ICD-10-CM	Diagnosis
V00.122A	Non-in-line roller-skater colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.122D	Non-in-line roller-skater colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.122S	Non-in-line roller-skater colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.128A	Other non-in-line roller-skating accident, initial encounter	ICD-10-CM	Diagnosis
V00.128D	Other non-in-line roller-skating accident, subsequent encounter	ICD-10-CM	Diagnosis
V00.128S	Other non-in-line roller-skating accident, sequela	ICD-10-CM	Diagnosis
V00.131A	Fall from skateboard, initial encounter	ICD-10-CM	Diagnosis
V00.131D	Fall from skateboard, subsequent encounter	ICD-10-CM	Diagnosis
V00.131S	Fall from skateboard, sequela	ICD-10-CM	Diagnosis
V00.132A	Skateboarder colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.132D	Skateboarder colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.132S	Skateboarder colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.138A	Other skateboard accident, initial encounter	ICD-10-CM	Diagnosis
V00.138D	Other skateboard accident, subsequent encounter	ICD-10-CM	Diagnosis
V00.138S	Other skateboard accident, sequela	ICD-10-CM	Diagnosis
V00.141A	Fall from scooter (nonmotorized), initial encounter	ICD-10-CM	Diagnosis
V00.141D	Fall from scooter (nonmotorized), subsequent encounter	ICD-10-CM	Diagnosis
V00.141S	Fall from scooter (nonmotorized), sequela	ICD-10-CM	Diagnosis
V00.142A	Scooter (nonmotorized) colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.142D	Scooter (nonmotorized) colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.142S	Scooter (nonmotorized) colliding with stationary object, sequela	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
V00.148A	Other scooter (nonmotorized) accident, initial encounter	ICD-10-CM	Diagnosis
V00.148D	Other scooter (nonmotorized) accident, subsequent encounter	ICD-10-CM	Diagnosis
V00.148S	Other scooter (nonmotorized) accident, sequela	ICD-10-CM	Diagnosis
V00.151A	Fall from heeies, initial encounter	ICD-10-CM	Diagnosis
V00.151D	Fall from heeies, subsequent encounter	ICD-10-CM	Diagnosis
V00.151S	Fall from heeies, sequela	ICD-10-CM	Diagnosis
V00.152A	Heelies colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.152D	Heelies colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.152S	Heelies colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.158A	Other heelies accident, initial encounter	ICD-10-CM	Diagnosis
V00.158D	Other heelies accident, subsequent encounter	ICD-10-CM	Diagnosis
V00.158S	Other heelies accident, sequela	ICD-10-CM	Diagnosis
V00.181A	Fall from other rolling-type pedestrian conveyance, initial encounter	ICD-10-CM	Diagnosis
V00.181D	Fall from other rolling-type pedestrian conveyance, subsequent encounter	ICD-10-CM	Diagnosis
V00.181S	Fall from other rolling-type pedestrian conveyance, sequela	ICD-10-CM	Diagnosis
V00.182A	Pedestrian on other rolling-type pedestrian conveyance colliding with stationary object. initial encounter	ICD-10-CM	Diagnosis
V00.182D	Pedestrian on other rolling-type pedestrian conveyance colliding with stationary object. subsequent encounter	ICD-10-CM	Diagnosis
V00.182S	Pedestrian on other rolling-type pedestrian conveyance colliding with stationary object. sequela	ICD-10-CM	Diagnosis
V00.188A	Other accident on other rolling-type pedestrian conveyance, initial encounter	ICD-10-CM	Diagnosis
V00.188D	Other accident on other rolling-type pedestrian conveyance, subsequent encounter	ICD-10-CM	Diagnosis
V00.188S	Other accident on other rolling-type pedestrian conveyance, sequela	ICD-10-CM	Diagnosis
V00.211A	Fall from ice-skates, initial encounter	ICD-10-CM	Diagnosis
V00.211D	Fall from ice-skates, subsequent encounter	ICD-10-CM	Diagnosis
V00.211S	Fall from ice-skates, sequela	ICD-10-CM	Diagnosis
V00.212A	Ice-skater colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.212D	Ice-skater colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.212S	Ice-skater colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.218A	Other ice-skates accident, initial encounter	ICD-10-CM	Diagnosis
V00.218D	Other ice-skates accident, subsequent encounter	ICD-10-CM	Diagnosis
V00.218S	Other ice-skates accident, sequela	ICD-10-CM	Diagnosis
V00.221A	Fall from sled, initial encounter	ICD-10-CM	Diagnosis
V00.221D	Fall from sled, subsequent encounter	ICD-10-CM	Diagnosis
V00.221S	Fall from sled, sequela	ICD-10-CM	Diagnosis
V00.222A	Sledder colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.222D	Sledder colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.222S	Sledder colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.228A	Other sled accident, initial encounter	ICD-10-CM	Diagnosis
V00.228D	Other sled accident, subsequent encounter	ICD-10-CM	Diagnosis
V00.228S	Other sled accident, sequela	ICD-10-CM	Diagnosis
V00.281A	Fall from other gliding-type pedestrian conveyance, initial encounter	ICD-10-CM	Diagnosis
V00.281D	Fall from other gliding-type pedestrian conveyance, subsequent encounter	ICD-10-CM	Diagnosis
V00.281S	Fall from other gliding-type pedestrian conveyance, sequela	ICD-10-CM	Diagnosis
V00.282A	Pedestrian on other gliding-type pedestrian conveyance colliding with stationary object. initial encounter	ICD-10-CM	Diagnosis
V00.282D	Pedestrian on other gliding-type pedestrian conveyance colliding with stationary object. subsequent encounter	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
V00.282S	Pedestrian on other gliding-type pedestrian conveyance colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.288A	Other accident on other gliding-type pedestrian conveyance, initial encounter	ICD-10-CM	Diagnosis
V00.288D	Other accident on other gliding-type pedestrian conveyance, subsequent encounter	ICD-10-CM	Diagnosis
V00.288S	Other accident on other gliding-type pedestrian conveyance, sequela	ICD-10-CM	Diagnosis
V00.311A	Fall from snowboard, initial encounter	ICD-10-CM	Diagnosis
V00.311D	Fall from snowboard, subsequent encounter	ICD-10-CM	Diagnosis
V00.311S	Fall from snowboard, sequela	ICD-10-CM	Diagnosis
V00.312A	Snowboarder colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.312D	Snowboarder colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.312S	Snowboarder colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.318A	Other snowboard accident, initial encounter	ICD-10-CM	Diagnosis
V00.318D	Other snowboard accident, subsequent encounter	ICD-10-CM	Diagnosis
V00.318S	Other snowboard accident, sequela	ICD-10-CM	Diagnosis
V00.321A	Fall from snow-skis, initial encounter	ICD-10-CM	Diagnosis
V00.321D	Fall from snow-skis, subsequent encounter	ICD-10-CM	Diagnosis
V00.321S	Fall from snow-skis, sequela	ICD-10-CM	Diagnosis
V00.322A	Snow-skier colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.322D	Snow-skier colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.322S	Snow-skier colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.328A	Other snow-ski accident, initial encounter	ICD-10-CM	Diagnosis
V00.328D	Other snow-ski accident, subsequent encounter	ICD-10-CM	Diagnosis
V00.328S	Other snow-ski accident, sequela	ICD-10-CM	Diagnosis
V00.381A	Fall from other flat-bottomed pedestrian conveyance, initial encounter	ICD-10-CM	Diagnosis
V00.381D	Fall from other flat-bottomed pedestrian conveyance, subsequent encounter	ICD-10-CM	Diagnosis
V00.381S	Fall from other flat-bottomed pedestrian conveyance, sequela	ICD-10-CM	Diagnosis
V00.382A	Pedestrian on other flat-bottomed pedestrian conveyance colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.382D	Pedestrian on other flat-bottomed pedestrian conveyance colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.382S	Pedestrian on other flat-bottomed pedestrian conveyance colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.388A	Other accident on other flat-bottomed pedestrian conveyance, initial encounter	ICD-10-CM	Diagnosis
V00.388D	Other accident on other flat-bottomed pedestrian conveyance, subsequent encounter	ICD-10-CM	Diagnosis
V00.388S	Other accident on other flat-bottomed pedestrian conveyance, sequela	ICD-10-CM	Diagnosis
V00.811A	Fall from moving wheelchair (powered), initial encounter	ICD-10-CM	Diagnosis
V00.811D	Fall from moving wheelchair (powered), subsequent encounter	ICD-10-CM	Diagnosis
V00.811S	Fall from moving wheelchair (powered), sequela	ICD-10-CM	Diagnosis
V00.812A	Wheelchair (powered) colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.812D	Wheelchair (powered) colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.812S	Wheelchair (powered) colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.818A	Other accident with wheelchair (powered), initial encounter	ICD-10-CM	Diagnosis
V00.818D	Other accident with wheelchair (powered), subsequent encounter	ICD-10-CM	Diagnosis
V00.818S	Other accident with wheelchair (powered), sequela	ICD-10-CM	Diagnosis
V00.821A	Fall from baby stroller, initial encounter	ICD-10-CM	Diagnosis
V00.821D	Fall from baby stroller, subsequent encounter	ICD-10-CM	Diagnosis
V00.821S	Fall from baby stroller, sequela	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
V00.822A	Baby stroller colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.822D	Baby stroller colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.822S	Baby stroller colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.828A	Other accident with baby stroller, initial encounter	ICD-10-CM	Diagnosis
V00.828D	Other accident with baby stroller, subsequent encounter	ICD-10-CM	Diagnosis
V00.828S	Other accident with baby stroller, sequela	ICD-10-CM	Diagnosis
V00.831A	Fall from motorized mobility scooter, initial encounter	ICD-10-CM	Diagnosis
V00.831D	Fall from motorized mobility scooter, subsequent encounter	ICD-10-CM	Diagnosis
V00.831S	Fall from motorized mobility scooter, sequela	ICD-10-CM	Diagnosis
V00.832A	Motorized mobility scooter colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.832D	Motorized mobility scooter colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.832S	Motorized mobility scooter colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.838A	Other accident with motorized mobility scooter, initial encounter	ICD-10-CM	Diagnosis
V00.838D	Other accident with motorized mobility scooter, subsequent encounter	ICD-10-CM	Diagnosis
V00.838S	Other accident with motorized mobility scooter, sequela	ICD-10-CM	Diagnosis
V00.891A	Fall from other pedestrian conveyance, initial encounter	ICD-10-CM	Diagnosis
V00.891D	Fall from other pedestrian conveyance, subsequent encounter	ICD-10-CM	Diagnosis
V00.891S	Fall from other pedestrian conveyance, sequela	ICD-10-CM	Diagnosis
V00.892A	Pedestrian on other pedestrian conveyance colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.892D	Pedestrian on other pedestrian conveyance colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.892S	Pedestrian on other pedestrian conveyance colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.898A	Other accident on other pedestrian conveyance, initial encounter	ICD-10-CM	Diagnosis
V00.898D	Other accident on other pedestrian conveyance, subsequent encounter	ICD-10-CM	Diagnosis
V00.898S	Other accident on other pedestrian conveyance, sequela	ICD-10-CM	Diagnosis
W00.0XXA	Fall on same level due to ice and snow, initial encounter	ICD-10-CM	Diagnosis
W00.0XXD	Fall on same level due to ice and snow, subsequent encounter	ICD-10-CM	Diagnosis
W00.0XXS	Fall on same level due to ice and snow, sequela	ICD-10-CM	Diagnosis
W00.1XXA	Fall from stairs and steps due to ice and snow, initial encounter	ICD-10-CM	Diagnosis
W00.1XXD	Fall from stairs and steps due to ice and snow, subsequent encounter	ICD-10-CM	Diagnosis
W00.1XXS	Fall from stairs and steps due to ice and snow, sequela	ICD-10-CM	Diagnosis
W00.2XXA	Other fall from one level to another due to ice and snow, initial encounter	ICD-10-CM	Diagnosis
W00.2XXD	Other fall from one level to another due to ice and snow, subsequent encounter	ICD-10-CM	Diagnosis
W00.2XXS	Other fall from one level to another due to ice and snow, sequela	ICD-10-CM	Diagnosis
W00.9XXA	Unspecified fall due to ice and snow, initial encounter	ICD-10-CM	Diagnosis
W00.9XXD	Unspecified fall due to ice and snow, subsequent encounter	ICD-10-CM	Diagnosis
W00.9XXS	Unspecified fall due to ice and snow, sequela	ICD-10-CM	Diagnosis
W01.0XXA	Fall on same level from slipping, tripping and stumbling without subsequent striking against object, initial encounter	ICD-10-CM	Diagnosis
W01.0XXD	Fall on same level from slipping, tripping and stumbling without subsequent striking against object, subsequent encounter	ICD-10-CM	Diagnosis
W01.0XXS	Fall on same level from slipping, tripping and stumbling without subsequent striking against object, sequela	ICD-10-CM	Diagnosis
W01.10XA	Fall on same level from slipping, tripping and stumbling with subsequent striking against unspecified object, initial encounter	ICD-10-CM	Diagnosis
W01.10XD	Fall on same level from slipping, tripping and stumbling with subsequent striking against unspecified object, subsequent encounter	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
W01.10XS	Fall on same level from slipping, tripping and stumbling with subsequent striking against unspecified object, sequela	ICD-10-CM	Diagnosis
W01.110A	Fall on same level from slipping, tripping and stumbling with subsequent striking against sharp glass, initial encounter	ICD-10-CM	Diagnosis
W01.110D	Fall on same level from slipping, tripping and stumbling with subsequent striking against sharp glass, subsequent encounter	ICD-10-CM	Diagnosis
W01.110S	Fall on same level from slipping, tripping and stumbling with subsequent striking against sharp glass, sequela	ICD-10-CM	Diagnosis
W01.111A	Fall on same level from slipping, tripping and stumbling with subsequent striking against power tool or machine, initial encounter	ICD-10-CM	Diagnosis
W01.111D	Fall on same level from slipping, tripping and stumbling with subsequent striking against power tool or machine, subsequent encounter	ICD-10-CM	Diagnosis
W01.111S	Fall on same level from slipping, tripping and stumbling with subsequent striking against power tool or machine, sequela	ICD-10-CM	Diagnosis
W01.118A	Fall on same level from slipping, tripping and stumbling with subsequent striking against other sharp object, initial encounter	ICD-10-CM	Diagnosis
W01.118D	Fall on same level from slipping, tripping and stumbling with subsequent striking against other sharp object, subsequent encounter	ICD-10-CM	Diagnosis
W01.118S	Fall on same level from slipping, tripping and stumbling with subsequent striking against other sharp object, sequela	ICD-10-CM	Diagnosis
W01.119A	Fall on same level from slipping, tripping and stumbling with subsequent striking against unspecified sharp object, initial encounter	ICD-10-CM	Diagnosis
W01.119D	Fall on same level from slipping, tripping and stumbling with subsequent striking against unspecified sharp object, subsequent encounter	ICD-10-CM	Diagnosis
W01.119S	Fall on same level from slipping, tripping and stumbling with subsequent striking against unspecified sharp object, sequela	ICD-10-CM	Diagnosis
W01.190A	Fall on same level from slipping, tripping and stumbling with subsequent striking against furniture, initial encounter	ICD-10-CM	Diagnosis
W01.190D	Fall on same level from slipping, tripping and stumbling with subsequent striking against furniture, subsequent encounter	ICD-10-CM	Diagnosis
W01.190S	Fall on same level from slipping, tripping and stumbling with subsequent striking against furniture, sequela	ICD-10-CM	Diagnosis
W01.198A	Fall on same level from slipping, tripping and stumbling with subsequent striking against other object, initial encounter	ICD-10-CM	Diagnosis
W01.198D	Fall on same level from slipping, tripping and stumbling with subsequent striking against other object, subsequent encounter	ICD-10-CM	Diagnosis
W01.198S	Fall on same level from slipping, tripping and stumbling with subsequent striking against other object, sequela	ICD-10-CM	Diagnosis
W03.XXXA	Other fall on same level due to collision with another person, initial encounter	ICD-10-CM	Diagnosis
W03.XXXD	Other fall on same level due to collision with another person, subsequent encounter	ICD-10-CM	Diagnosis
W03.XXXS	Other fall on same level due to collision with another person, sequela	ICD-10-CM	Diagnosis
W04.XXXA	Fall while being carried or supported by other persons, initial encounter	ICD-10-CM	Diagnosis
W04.XXXD	Fall while being carried or supported by other persons, subsequent encounter	ICD-10-CM	Diagnosis
W04.XXXS	Fall while being carried or supported by other persons, sequela	ICD-10-CM	Diagnosis
W05.OXXA	Fall from non-moving wheelchair, initial encounter	ICD-10-CM	Diagnosis
W05.OXXD	Fall from non-moving wheelchair, subsequent encounter	ICD-10-CM	Diagnosis
W05.OXXS	Fall from non-moving wheelchair, sequela	ICD-10-CM	Diagnosis
W05.1XXA	Fall from non-moving nonmotorized scooter, initial encounter	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
W05.1XXD	Fall from non-moving nonmotorized scooter, subsequent encounter	ICD-10-CM	Diagnosis
W05.1XXS	Fall from non-moving nonmotorized scooter, sequela	ICD-10-CM	Diagnosis
W05.2XXA	Fall from non-moving motorized mobility scooter, initial encounter	ICD-10-CM	Diagnosis
W05.2XXD	Fall from non-moving motorized mobility scooter, subsequent encounter	ICD-10-CM	Diagnosis
W05.2XXS	Fall from non-moving motorized mobility scooter, sequela	ICD-10-CM	Diagnosis
W06.XXXA	Fall from bed, initial encounter	ICD-10-CM	Diagnosis
W06.XXXD	Fall from bed, subsequent encounter	ICD-10-CM	Diagnosis
W06.XXXS	Fall from bed, sequela	ICD-10-CM	Diagnosis
W07.XXXA	Fall from chair, initial encounter	ICD-10-CM	Diagnosis
W07.XXXD	Fall from chair, subsequent encounter	ICD-10-CM	Diagnosis
W07.XXXS	Fall from chair, sequela	ICD-10-CM	Diagnosis
W08.XXXA	Fall from other furniture, initial encounter	ICD-10-CM	Diagnosis
W08.XXXD	Fall from other furniture, subsequent encounter	ICD-10-CM	Diagnosis
W08.XXXS	Fall from other furniture, sequela	ICD-10-CM	Diagnosis
W09.0XXA	Fall on or from playground slide, initial encounter	ICD-10-CM	Diagnosis
W09.0XXD	Fall on or from playground slide, subsequent encounter	ICD-10-CM	Diagnosis
W09.0XXS	Fall on or from playground slide, sequela	ICD-10-CM	Diagnosis
W09.1XXA	Fall from playground swing, initial encounter	ICD-10-CM	Diagnosis
W09.1XXD	Fall from playground swing, subsequent encounter	ICD-10-CM	Diagnosis
W09.1XXS	Fall from playground swing, sequela	ICD-10-CM	Diagnosis
W09.2XXA	Fall on or from jungle gym, initial encounter	ICD-10-CM	Diagnosis
W09.2XXD	Fall on or from jungle gym, subsequent encounter	ICD-10-CM	Diagnosis
W09.2XXS	Fall on or from jungle gym, sequela	ICD-10-CM	Diagnosis
W09.8XXA	Fall on or from other playground equipment, initial encounter	ICD-10-CM	Diagnosis
W09.8XXD	Fall on or from other playground equipment, subsequent encounter	ICD-10-CM	Diagnosis
W09.8XXS	Fall on or from other playground equipment, sequela	ICD-10-CM	Diagnosis
W10.0XXA	Fall (on)(from) escalator, initial encounter	ICD-10-CM	Diagnosis
W10.0XXD	Fall (on)(from) escalator, subsequent encounter	ICD-10-CM	Diagnosis
W10.0XXS	Fall (on)(from) escalator, sequela	ICD-10-CM	Diagnosis
W10.1XXA	Fall (on)(from) sidewalk curb, initial encounter	ICD-10-CM	Diagnosis
W10.1XXD	Fall (on)(from) sidewalk curb, subsequent encounter	ICD-10-CM	Diagnosis
W10.1XXS	Fall (on)(from) sidewalk curb, sequela	ICD-10-CM	Diagnosis
W10.2XXA	Fall (on)(from) incline, initial encounter	ICD-10-CM	Diagnosis
W10.2XXD	Fall (on)(from) incline, subsequent encounter	ICD-10-CM	Diagnosis
W10.2XXS	Fall (on)(from) incline, sequela	ICD-10-CM	Diagnosis
W10.8XXA	Fall (on) (from) other stairs and steps, initial encounter	ICD-10-CM	Diagnosis
W10.8XXD	Fall (on) (from) other stairs and steps, subsequent encounter	ICD-10-CM	Diagnosis
W10.8XXS	Fall (on) (from) other stairs and steps, sequela	ICD-10-CM	Diagnosis
W10.9XXA	Fall (on) (from) unspecified stairs and steps, initial encounter	ICD-10-CM	Diagnosis
W10.9XXD	Fall (on) (from) unspecified stairs and steps, subsequent encounter	ICD-10-CM	Diagnosis
W10.9XXS	Fall (on) (from) unspecified stairs and steps, sequela	ICD-10-CM	Diagnosis
W11.XXXA	Fall on and from ladder, initial encounter	ICD-10-CM	Diagnosis
W11.XXXD	Fall on and from ladder, subsequent encounter	ICD-10-CM	Diagnosis
W11.XXXS	Fall on and from ladder, sequela	ICD-10-CM	Diagnosis
W12.XXXA	Fall on and from scaffolding, initial encounter	ICD-10-CM	Diagnosis
W12.XXXD	Fall on and from scaffolding, subsequent encounter	ICD-10-CM	Diagnosis
W12.XXXS	Fall on and from scaffolding, sequela	ICD-10-CM	Diagnosis
W13.0XXA	Fall from, out of or through balcony, initial encounter	ICD-10-CM	Diagnosis
W13.0XXD	Fall from, out of or through balcony, subsequent encounter	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
W13.0XXS	Fall from, out of or through balcony, sequela	ICD-10-CM	Diagnosis
W13.1XXA	Fall from, out of or through bridge, initial encounter	ICD-10-CM	Diagnosis
W13.1XXD	Fall from, out of or through bridge, subsequent encounter	ICD-10-CM	Diagnosis
W13.1XXS	Fall from, out of or through bridge, sequela	ICD-10-CM	Diagnosis
W13.2XXA	Fall from, out of or through roof, initial encounter	ICD-10-CM	Diagnosis
W13.2XXD	Fall from, out of or through roof, subsequent encounter	ICD-10-CM	Diagnosis
W13.2XXS	Fall from, out of or through roof, sequela	ICD-10-CM	Diagnosis
W13.3XXA	Fall through floor, initial encounter	ICD-10-CM	Diagnosis
W13.3XXD	Fall through floor, subsequent encounter	ICD-10-CM	Diagnosis
W13.3XXS	Fall through floor, sequela	ICD-10-CM	Diagnosis
W13.4XXA	Fall from, out of or through window, initial encounter	ICD-10-CM	Diagnosis
W13.4XXD	Fall from, out of or through window, subsequent encounter	ICD-10-CM	Diagnosis
W13.4XXS	Fall from, out of or through window, sequela	ICD-10-CM	Diagnosis
W13.8XXA	Fall from, out of or through other building or structure, initial encounter	ICD-10-CM	Diagnosis
W13.8XXD	Fall from, out of or through other building or structure, subsequent encounter	ICD-10-CM	Diagnosis
W13.8XXS	Fall from, out of or through other building or structure, sequela	ICD-10-CM	Diagnosis
W13.9XXA	Fall from, out of or through building, not otherwise specified, initial encounter	ICD-10-CM	Diagnosis
W13.9XXD	Fall from, out of or through building, not otherwise specified, subsequent encounter	ICD-10-CM	Diagnosis
W13.9XXS	Fall from, out of or through building, not otherwise specified, sequela	ICD-10-CM	Diagnosis
W14.XXXA	Fall from tree, initial encounter	ICD-10-CM	Diagnosis
W14.XXXD	Fall from tree, subsequent encounter	ICD-10-CM	Diagnosis
W14.XXXS	Fall from tree, sequela	ICD-10-CM	Diagnosis
W15.XXXA	Fall from cliff, initial encounter	ICD-10-CM	Diagnosis
W15.XXXD	Fall from cliff, subsequent encounter	ICD-10-CM	Diagnosis
W15.XXXS	Fall from cliff, sequela	ICD-10-CM	Diagnosis
W16.011A	Fall into swimming pool striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.011D	Fall into swimming pool striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.011S	Fall into swimming pool striking water surface causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.012A	Fall into swimming pool striking water surface causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.012D	Fall into swimming pool striking water surface causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.012S	Fall into swimming pool striking water surface causing other injury, sequela	ICD-10-CM	Diagnosis
W16.021A	Fall into swimming pool striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.021D	Fall into swimming pool striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.021S	Fall into swimming pool striking bottom causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.022A	Fall into swimming pool striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.022D	Fall into swimming pool striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.022S	Fall into swimming pool striking bottom causing other injury, sequela	ICD-10-CM	Diagnosis
W16.031A	Fall into swimming pool striking wall causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.031D	Fall into swimming pool striking wall causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.031S	Fall into swimming pool striking wall causing drowning and submersion, sequela	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
W16.032A	Fall into swimming pool striking wall causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.032D	Fall into swimming pool striking wall causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.032S	Fall into swimming pool striking wall causing other injury, sequela	ICD-10-CM	Diagnosis
W16.111A	Fall into natural body of water striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.111D	Fall into natural body of water striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.111S	Fall into natural body of water striking water surface causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.112A	Fall into natural body of water striking water surface causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.112D	Fall into natural body of water striking water surface causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.112S	Fall into natural body of water striking water surface causing other injury, sequela	ICD-10-CM	Diagnosis
W16.121A	Fall into natural body of water striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.121D	Fall into natural body of water striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.121S	Fall into natural body of water striking bottom causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.122A	Fall into natural body of water striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.122D	Fall into natural body of water striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.122S	Fall into natural body of water striking bottom causing other injury, sequela	ICD-10-CM	Diagnosis
W16.131A	Fall into natural body of water striking side causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.131D	Fall into natural body of water striking side causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.131S	Fall into natural body of water striking side causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.132A	Fall into natural body of water striking side causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.132D	Fall into natural body of water striking side causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.132S	Fall into natural body of water striking side causing other injury, sequela	ICD-10-CM	Diagnosis
W16.211A	Fall in (into) filled bathtub causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.211D	Fall in (into) filled bathtub causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.211S	Fall in (into) filled bathtub causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.212A	Fall in (into) filled bathtub causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.212D	Fall in (into) filled bathtub causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.212S	Fall in (into) filled bathtub causing other injury, sequela	ICD-10-CM	Diagnosis
W16.221A	Fall in (into) bucket of water causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.221D	Fall in (into) bucket of water causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.221S	Fall in (into) bucket of water causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.222A	Fall in (into) bucket of water causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.222D	Fall in (into) bucket of water causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.222S	Fall in (into) bucket of water causing other injury, sequela	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
W16.311A	Fall into other water striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.311D	Fall into other water striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.311S	Fall into other water striking water surface causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.312A	Fall into other water striking water surface causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.312D	Fall into other water striking water surface causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.312S	Fall into other water striking water surface causing other injury, sequela	ICD-10-CM	Diagnosis
W16.321A	Fall into other water striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.321D	Fall into other water striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.321S	Fall into other water striking bottom causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.322A	Fall into other water striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.322D	Fall into other water striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.322S	Fall into other water striking bottom causing other injury, sequela	ICD-10-CM	Diagnosis
W16.331A	Fall into other water striking wall causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.331D	Fall into other water striking wall causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.331S	Fall into other water striking wall causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.332A	Fall into other water striking wall causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.332D	Fall into other water striking wall causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.332S	Fall into other water striking wall causing other injury, sequela	ICD-10-CM	Diagnosis
W16.41XA	Fall into unspecified water causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.41XD	Fall into unspecified water causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.41XS	Fall into unspecified water causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.42XA	Fall into unspecified water causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.42XD	Fall into unspecified water causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.42XS	Fall into unspecified water causing other injury, sequela	ICD-10-CM	Diagnosis
W16.511A	Jumping or diving into swimming pool striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.511D	Jumping or diving into swimming pool striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.511S	Jumping or diving into swimming pool striking water surface causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.512A	Jumping or diving into swimming pool striking water surface causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.512D	Jumping or diving into swimming pool striking water surface causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.512S	Jumping or diving into swimming pool striking water surface causing other injury, sequela	ICD-10-CM	Diagnosis
W16.521A	Jumping or diving into swimming pool striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.521D	Jumping or diving into swimming pool striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
W16.521S	Jumping or diving into swimming pool striking bottom causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.522A	Jumping or diving into swimming pool striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.522D	Jumping or diving into swimming pool striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.522S	Jumping or diving into swimming pool striking bottom causing other injury, sequela	ICD-10-CM	Diagnosis
W16.531A	Jumping or diving into swimming pool striking wall causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.531D	Jumping or diving into swimming pool striking wall causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.531S	Jumping or diving into swimming pool striking wall causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.532A	Jumping or diving into swimming pool striking wall causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.532D	Jumping or diving into swimming pool striking wall causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.532S	Jumping or diving into swimming pool striking wall causing other injury, sequela	ICD-10-CM	Diagnosis
W16.611A	Jumping or diving into natural body of water striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.611D	Jumping or diving into natural body of water striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.611S	Jumping or diving into natural body of water striking water surface causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.612A	Jumping or diving into natural body of water striking water surface causing other injurv, initial encounter	ICD-10-CM	Diagnosis
W16.612D	Jumping or diving into natural body of water striking water surface causing other injurv, subsequent encounter	ICD-10-CM	Diagnosis
W16.612S	Jumping or diving into natural body of water striking water surface causing other injurv, sequela	ICD-10-CM	Diagnosis
W16.621A	Jumping or diving into natural body of water striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.621D	Jumping or diving into natural body of water striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.621S	Jumping or diving into natural body of water striking bottom causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.622A	Jumping or diving into natural body of water striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.622D	Jumping or diving into natural body of water striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.622S	Jumping or diving into natural body of water striking bottom causing other injury, sequela	ICD-10-CM	Diagnosis
W16.711A	Jumping or diving from boat striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.711D	Jumping or diving from boat striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.711S	Jumping or diving from boat striking water surface causing drowning and submersion, sequela	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
W16.712A	Jumping or diving from boat striking water surface causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.712D	Jumping or diving from boat striking water surface causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.712S	Jumping or diving from boat striking water surface causing other injury, sequela	ICD-10-CM	Diagnosis
W16.721A	Jumping or diving from boat striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.721D	Jumping or diving from boat striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.721S	Jumping or diving from boat striking bottom causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.722A	Jumping or diving from boat striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.722D	Jumping or diving from boat striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.722S	Jumping or diving from boat striking bottom causing other injury, sequela	ICD-10-CM	Diagnosis
W16.811A	Jumping or diving into other water striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.811D	Jumping or diving into other water striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.811S	Jumping or diving into other water striking water surface causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.812A	Jumping or diving into other water striking water surface causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.812D	Jumping or diving into other water striking water surface causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.812S	Jumping or diving into other water striking water surface causing other injury, sequela	ICD-10-CM	Diagnosis
W16.821A	Jumping or diving into other water striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.821D	Jumping or diving into other water striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.821S	Jumping or diving into other water striking bottom causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.822A	Jumping or diving into other water striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.822D	Jumping or diving into other water striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.822S	Jumping or diving into other water striking bottom causing other injury, sequela	ICD-10-CM	Diagnosis
W16.831A	Jumping or diving into other water striking wall causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.831D	Jumping or diving into other water striking wall causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.831S	Jumping or diving into other water striking wall causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.832A	Jumping or diving into other water striking wall causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.832D	Jumping or diving into other water striking wall causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.832S	Jumping or diving into other water striking wall causing other injury, sequela	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
W16.91XA	Jumping or diving into unspecified water causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.91XD	Jumping or diving into unspecified water causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.91XS	Jumping or diving into unspecified water causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.92XA	Jumping or diving into unspecified water causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.92XD	Jumping or diving into unspecified water causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.92XS	Jumping or diving into unspecified water causing other injury, sequela	ICD-10-CM	Diagnosis
W17.0XXA	Fall into well, initial encounter	ICD-10-CM	Diagnosis
W17.0XXD	Fall into well, subsequent encounter	ICD-10-CM	Diagnosis
W17.0XXS	Fall into well, sequela	ICD-10-CM	Diagnosis
W17.1XXA	Fall into storm drain or manhole, initial encounter	ICD-10-CM	Diagnosis
W17.1XXD	Fall into storm drain or manhole, subsequent encounter	ICD-10-CM	Diagnosis
W17.1XXS	Fall into storm drain or manhole, sequela	ICD-10-CM	Diagnosis
W17.2XXA	Fall into hole, initial encounter	ICD-10-CM	Diagnosis
W17.2XXD	Fall into hole, subsequent encounter	ICD-10-CM	Diagnosis
W17.2XXS	Fall into hole, sequela	ICD-10-CM	Diagnosis
W17.3XXA	Fall into empty swimming pool, initial encounter	ICD-10-CM	Diagnosis
W17.3XXD	Fall into empty swimming pool, subsequent encounter	ICD-10-CM	Diagnosis
W17.3XXS	Fall into empty swimming pool, sequela	ICD-10-CM	Diagnosis
W17.4XXA	Fall from dock, initial encounter	ICD-10-CM	Diagnosis
W17.4XXD	Fall from dock, subsequent encounter	ICD-10-CM	Diagnosis
W17.4XXS	Fall from dock, sequela	ICD-10-CM	Diagnosis
W17.81XA	Fall down embankment (hill), initial encounter	ICD-10-CM	Diagnosis
W17.81XD	Fall down embankment (hill), subsequent encounter	ICD-10-CM	Diagnosis
W17.81XS	Fall down embankment (hill), sequela	ICD-10-CM	Diagnosis
W17.82XA	Fall from (out of) grocery cart, initial encounter	ICD-10-CM	Diagnosis
W17.82XD	Fall from (out of) grocery cart, subsequent encounter	ICD-10-CM	Diagnosis
W17.82XS	Fall from (out of) grocery cart, sequela	ICD-10-CM	Diagnosis
W17.89XA	Other fall from one level to another, initial encounter	ICD-10-CM	Diagnosis
W17.89XD	Other fall from one level to another, subsequent encounter	ICD-10-CM	Diagnosis
W17.89XS	Other fall from one level to another, sequela	ICD-10-CM	Diagnosis
W18.00XA	Striking against unspecified object with subsequent fall, initial encounter	ICD-10-CM	Diagnosis
W18.00XD	Striking against unspecified object with subsequent fall, subsequent encounter	ICD-10-CM	Diagnosis
W18.00XS	Striking against unspecified object with subsequent fall, sequela	ICD-10-CM	Diagnosis
W18.01XA	Striking against sports equipment with subsequent fall, initial encounter	ICD-10-CM	Diagnosis
W18.01XD	Striking against sports equipment with subsequent fall, subsequent encounter	ICD-10-CM	Diagnosis
W18.01XS	Striking against sports equipment with subsequent fall, sequela	ICD-10-CM	Diagnosis
W18.02XA	Striking against glass with subsequent fall, initial encounter	ICD-10-CM	Diagnosis
W18.02XD	Striking against glass with subsequent fall, subsequent encounter	ICD-10-CM	Diagnosis
W18.02XS	Striking against glass with subsequent fall, sequela	ICD-10-CM	Diagnosis
W18.09XA	Striking against other object with subsequent fall, initial encounter	ICD-10-CM	Diagnosis
W18.09XD	Striking against other object with subsequent fall, subsequent encounter	ICD-10-CM	Diagnosis
W18.09XS	Striking against other object with subsequent fall, sequela	ICD-10-CM	Diagnosis
W18.11XA	Fall from or off toilet without subsequent striking against object, initial encounter	ICD-10-CM	Diagnosis
W18.11XD	Fall from or off toilet without subsequent striking against object, subsequent encounter	ICD-10-CM	Diagnosis
W18.11XS	Fall from or off toilet without subsequent striking against object, sequela	ICD-10-CM	Diagnosis
W18.12XA	Fall from or off toilet with subsequent striking against object, initial encounter	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
W18.12XD	Fall from or off toilet with subsequent striking against object, subsequent encounter	ICD-10-CM	Diagnosis
W18.12XS	Fall from or off toilet with subsequent striking against object, sequela	ICD-10-CM	Diagnosis
W18.2XXA	Fall in (into) shower or empty bathtub, initial encounter	ICD-10-CM	Diagnosis
W18.2XXD	Fall in (into) shower or empty bathtub, subsequent encounter	ICD-10-CM	Diagnosis
W18.2XXS	Fall in (into) shower or empty bathtub, sequela	ICD-10-CM	Diagnosis
W18.30XA	Fall on same level, unspecified, initial encounter	ICD-10-CM	Diagnosis
W18.30XD	Fall on same level, unspecified, subsequent encounter	ICD-10-CM	Diagnosis
W18.30XS	Fall on same level, unspecified, sequela	ICD-10-CM	Diagnosis
W18.31XA	Fall on same level due to stepping on an object, initial encounter	ICD-10-CM	Diagnosis
W18.31XD	Fall on same level due to stepping on an object, subsequent encounter	ICD-10-CM	Diagnosis
W18.31XS	Fall on same level due to stepping on an object, sequela	ICD-10-CM	Diagnosis
W18.39XA	Other fall on same level, initial encounter	ICD-10-CM	Diagnosis
W18.39XD	Other fall on same level, subsequent encounter	ICD-10-CM	Diagnosis
W18.39XS	Other fall on same level, sequela	ICD-10-CM	Diagnosis
W18.40XA	Slipping, tripping and stumbling without falling, unspecified, initial encounter	ICD-10-CM	Diagnosis
W18.40XD	Slipping, tripping and stumbling without falling, unspecified, subsequent encounter	ICD-10-CM	Diagnosis
W18.40XS	Slipping, tripping and stumbling without falling, unspecified, sequela	ICD-10-CM	Diagnosis
W18.41XA	Slipping, tripping and stumbling without falling due to stepping on object, initial encounter	ICD-10-CM	Diagnosis
W18.41XD	Slipping, tripping and stumbling without falling due to stepping on object, subsequent encounter	ICD-10-CM	Diagnosis
W18.41XS	Slipping, tripping and stumbling without falling due to stepping on object, sequela	ICD-10-CM	Diagnosis
W18.42XA	Slipping, tripping and stumbling without falling due to stepping into hole or opening, initial encounter	ICD-10-CM	Diagnosis
W18.42XD	Slipping, tripping and stumbling without falling due to stepping into hole or opening, subsequent encounter	ICD-10-CM	Diagnosis
W18.42XS	Slipping, tripping and stumbling without falling due to stepping into hole or opening, sequela	ICD-10-CM	Diagnosis
W18.43XA	Slipping, tripping and stumbling without falling due to stepping from one level to another, initial encounter	ICD-10-CM	Diagnosis
W18.43XD	Slipping, tripping and stumbling without falling due to stepping from one level to another, subsequent encounter	ICD-10-CM	Diagnosis
W18.43XS	Slipping, tripping and stumbling without falling due to stepping from one level to another, sequela	ICD-10-CM	Diagnosis
W18.49XA	Other slipping, tripping and stumbling without falling, initial encounter	ICD-10-CM	Diagnosis
W18.49XD	Other slipping, tripping and stumbling without falling, subsequent encounter	ICD-10-CM	Diagnosis
W18.49XS	Other slipping, tripping and stumbling without falling, sequela	ICD-10-CM	Diagnosis
W19.XXXA	Unspecified fall, initial encounter	ICD-10-CM	Diagnosis
W19.XXXD	Unspecified fall, subsequent encounter	ICD-10-CM	Diagnosis
W19.XXXS	Unspecified fall, sequela	ICD-10-CM	Diagnosis
W50.0XXA	Accidental hit or strike by another person, initial encounter	ICD-10-CM	Diagnosis
W50.0XXD	Accidental hit or strike by another person, subsequent encounter	ICD-10-CM	Diagnosis
W50.1XXA	Accidental kick by another person, initial encounter	ICD-10-CM	Diagnosis
W50.1XXD	Accidental kick by another person, subsequent encounter	ICD-10-CM	Diagnosis
W50.2XXA	Accidental twist by another person, initial encounter	ICD-10-CM	Diagnosis
W50.2XXD	Accidental twist by another person, subsequent encounter	ICD-10-CM	Diagnosis
W50.4XXA	Accidental scratch by another person, initial encounter	ICD-10-CM	Diagnosis
W50.4XXD	Accidental scratch by another person, subsequent encounter	ICD-10-CM	Diagnosis
W51.XXXA	Accidental striking against or bumped into by another person, initial encounter	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
W51.XXXD	Accidental striking against or bumped into by another person, subsequent encounter	ICD-10-CM	Diagnosis
W52.XXXA	Crushed, pushed or stepped on by crowd or human stampede, initial encounter	ICD-10-CM	Diagnosis
S22.31XA	Fracture of one rib, right side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.31XB	Fracture of one rib, right side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.32XA	Fracture of one rib, left side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.32XB	Fracture of one rib, left side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.39XA	Fracture of one rib, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.39XB	Fracture of one rib, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.41XA	Multiple fractures of ribs, right side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.41XB	Multiple fractures of ribs, right side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.42XA	Multiple fractures of ribs, left side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.42XB	Multiple fractures of ribs, left side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.43XA	Multiple fractures of ribs, bilateral, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.43XB	Multiple fractures of ribs, bilateral, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.49XA	Multiple fractures of ribs, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.49XB	Multiple fractures of ribs, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.001A	Fracture of unspecified part of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.001B	Fracture of unspecified part of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.002A	Fracture of unspecified part of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.002B	Fracture of unspecified part of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.009A	Fracture of unspecified part of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.009B	Fracture of unspecified part of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.011A	Anterior displaced fracture of sternal end of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.011B	Anterior displaced fracture of sternal end of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.012A	Anterior displaced fracture of sternal end of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.012B	Anterior displaced fracture of sternal end of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.013A	Anterior displaced fracture of sternal end of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.013B	Anterior displaced fracture of sternal end of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.014A	Posterior displaced fracture of sternal end of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.014B	Posterior displaced fracture of sternal end of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.015A	Posterior displaced fracture of sternal end of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.015B	Posterior displaced fracture of sternal end of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.016A	Posterior displaced fracture of sternal end of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.016B	Posterior displaced fracture of sternal end of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S42.017A	Nondisplaced fracture of sternal end of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.017B	Nondisplaced fracture of sternal end of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.018A	Nondisplaced fracture of sternal end of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.018B	Nondisplaced fracture of sternal end of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.019A	Nondisplaced fracture of sternal end of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.019B	Nondisplaced fracture of sternal end of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.021A	Displaced fracture of shaft of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.021B	Displaced fracture of shaft of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.022A	Displaced fracture of shaft of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.022B	Displaced fracture of shaft of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.023A	Displaced fracture of shaft of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.023B	Displaced fracture of shaft of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.024A	Nondisplaced fracture of shaft of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.024B	Nondisplaced fracture of shaft of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.025A	Nondisplaced fracture of shaft of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.025B	Nondisplaced fracture of shaft of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.026A	Nondisplaced fracture of shaft of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.026B	Nondisplaced fracture of shaft of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.031A	Displaced fracture of lateral end of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.031B	Displaced fracture of lateral end of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.032A	Displaced fracture of lateral end of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.032B	Displaced fracture of lateral end of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.033A	Displaced fracture of lateral end of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.033B	Displaced fracture of lateral end of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.034A	Nondisplaced fracture of lateral end of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.034B	Nondisplaced fracture of lateral end of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.035A	Nondisplaced fracture of lateral end of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.035B	Nondisplaced fracture of lateral end of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.036A	Nondisplaced fracture of lateral end of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.036B	Nondisplaced fracture of lateral end of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S52.001A	Unspecified fracture of upper end of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.001B	Unspecified fracture of upper end of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.001C	Unspecified fracture of upper end of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.002A	Unspecified fracture of upper end of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.002B	Unspecified fracture of upper end of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.002C	Unspecified fracture of upper end of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.009A	Unspecified fracture of upper end of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.009B	Unspecified fracture of upper end of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.009C	Unspecified fracture of upper end of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.011A	Torus fracture of upper end of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.012A	Torus fracture of upper end of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.019A	Torus fracture of upper end of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.021A	Displaced fracture of olecranon process without intraarticular extension of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.021B	Displaced fracture of olecranon process without intraarticular extension of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.021C	Displaced fracture of olecranon process without intraarticular extension of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.022A	Displaced fracture of olecranon process without intraarticular extension of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.022B	Displaced fracture of olecranon process without intraarticular extension of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.022C	Displaced fracture of olecranon process without intraarticular extension of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.023A	Displaced fracture of olecranon process without intraarticular extension of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.023B	Displaced fracture of olecranon process without intraarticular extension of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.023C	Displaced fracture of olecranon process without intraarticular extension of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.024A	Nondisplaced fracture of olecranon process without intraarticular extension of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.024B	Nondisplaced fracture of olecranon process without intraarticular extension of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.024C	Nondisplaced fracture of olecranon process without intraarticular extension of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.025A	Nondisplaced fracture of olecranon process without intraarticular extension of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.025B	Nondisplaced fracture of olecranon process without intraarticular extension of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.025C	Nondisplaced fracture of olecranon process without intraarticular extension of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S52.026A	Nondisplaced fracture of olecranon process without intraarticular extension of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.026B	Nondisplaced fracture of olecranon process without intraarticular extension of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.026C	Nondisplaced fracture of olecranon process without intraarticular extension of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.031A	Displaced fracture of olecranon process with intraarticular extension of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.031B	Displaced fracture of olecranon process with intraarticular extension of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.031C	Displaced fracture of olecranon process with intraarticular extension of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.032A	Displaced fracture of olecranon process with intraarticular extension of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.032B	Displaced fracture of olecranon process with intraarticular extension of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.032C	Displaced fracture of olecranon process with intraarticular extension of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.033A	Displaced fracture of olecranon process with intraarticular extension of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.033B	Displaced fracture of olecranon process with intraarticular extension of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.033C	Displaced fracture of olecranon process with intraarticular extension of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.034A	Nondisplaced fracture of olecranon process with intraarticular extension of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.034B	Nondisplaced fracture of olecranon process with intraarticular extension of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.034C	Nondisplaced fracture of olecranon process with intraarticular extension of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.035A	Nondisplaced fracture of olecranon process with intraarticular extension of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.035B	Nondisplaced fracture of olecranon process with intraarticular extension of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.035C	Nondisplaced fracture of olecranon process with intraarticular extension of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.036A	Nondisplaced fracture of olecranon process with intraarticular extension of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.036B	Nondisplaced fracture of olecranon process with intraarticular extension of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.036C	Nondisplaced fracture of olecranon process with intraarticular extension of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.041A	Displaced fracture of coronoid process of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.041B	Displaced fracture of coronoid process of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.041C	Displaced fracture of coronoid process of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S52.042A	Displaced fracture of coronoid process of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.042B	Displaced fracture of coronoid process of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.042C	Displaced fracture of coronoid process of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.043A	Displaced fracture of coronoid process of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.043B	Displaced fracture of coronoid process of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.043C	Displaced fracture of coronoid process of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.044A	Nondisplaced fracture of coronoid process of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.044B	Nondisplaced fracture of coronoid process of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.044C	Nondisplaced fracture of coronoid process of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.045A	Nondisplaced fracture of coronoid process of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.045B	Nondisplaced fracture of coronoid process of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.045C	Nondisplaced fracture of coronoid process of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.046A	Nondisplaced fracture of coronoid process of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.046B	Nondisplaced fracture of coronoid process of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.046C	Nondisplaced fracture of coronoid process of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.091A	Other fracture of upper end of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.091B	Other fracture of upper end of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.091C	Other fracture of upper end of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.092A	Other fracture of upper end of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.092B	Other fracture of upper end of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.092C	Other fracture of upper end of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.099A	Other fracture of upper end of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.099B	Other fracture of upper end of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.099C	Other fracture of upper end of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.101A	Unspecified fracture of upper end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.101B	Unspecified fracture of upper end of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S52.101C	Unspecified fracture of upper end of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.102A	Unspecified fracture of upper end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.102B	Unspecified fracture of upper end of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.102C	Unspecified fracture of upper end of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.109A	Unspecified fracture of upper end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.109B	Unspecified fracture of upper end of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.109C	Unspecified fracture of upper end of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.111A	Torus fracture of upper end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.112A	Torus fracture of upper end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.119A	Torus fracture of upper end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.121A	Displaced fracture of head of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.121B	Displaced fracture of head of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.121C	Displaced fracture of head of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.122A	Displaced fracture of head of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.122B	Displaced fracture of head of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.122C	Displaced fracture of head of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.123A	Displaced fracture of head of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.123B	Displaced fracture of head of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.123C	Displaced fracture of head of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.124A	Nondisplaced fracture of head of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.124B	Nondisplaced fracture of head of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.124C	Nondisplaced fracture of head of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.125A	Nondisplaced fracture of head of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.125B	Nondisplaced fracture of head of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.125C	Nondisplaced fracture of head of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.126A	Nondisplaced fracture of head of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.126B	Nondisplaced fracture of head of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.126C	Nondisplaced fracture of head of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S52.131A	Displaced fracture of neck of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.131B	Displaced fracture of neck of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.131C	Displaced fracture of neck of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.132A	Displaced fracture of neck of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.132B	Displaced fracture of neck of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.132C	Displaced fracture of neck of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.133A	Displaced fracture of neck of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.133B	Displaced fracture of neck of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.133C	Displaced fracture of neck of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.134A	Nondisplaced fracture of neck of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.134B	Nondisplaced fracture of neck of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.134C	Nondisplaced fracture of neck of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.135A	Nondisplaced fracture of neck of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.135B	Nondisplaced fracture of neck of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.135C	Nondisplaced fracture of neck of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.136A	Nondisplaced fracture of neck of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.136B	Nondisplaced fracture of neck of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.136C	Nondisplaced fracture of neck of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.181A	Other fracture of upper end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.181B	Other fracture of upper end of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.181C	Other fracture of upper end of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.182A	Other fracture of upper end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.182B	Other fracture of upper end of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.182C	Other fracture of upper end of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.189A	Other fracture of upper end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.189B	Other fracture of upper end of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.189C	Other fracture of upper end of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.201A	Unspecified fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S52.201B	Unspecified fracture of shaft of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.201C	Unspecified fracture of shaft of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.202A	Unspecified fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.202B	Unspecified fracture of shaft of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.202C	Unspecified fracture of shaft of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.209A	Unspecified fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.209B	Unspecified fracture of shaft of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.209C	Unspecified fracture of shaft of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.211A	Greenstick fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.212A	Greenstick fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.219A	Greenstick fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.221A	Displaced transverse fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.221B	Displaced transverse fracture of shaft of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.221C	Displaced transverse fracture of shaft of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.222A	Displaced transverse fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.222B	Displaced transverse fracture of shaft of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.222C	Displaced transverse fracture of shaft of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.223A	Displaced transverse fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.223B	Displaced transverse fracture of shaft of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.223C	Displaced transverse fracture of shaft of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.224A	Nondisplaced transverse fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.224B	Nondisplaced transverse fracture of shaft of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.224C	Nondisplaced transverse fracture of shaft of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.225A	Nondisplaced transverse fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.225B	Nondisplaced transverse fracture of shaft of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.225C	Nondisplaced transverse fracture of shaft of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S52.226A	Nondisplaced transverse fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.226B	Nondisplaced transverse fracture of shaft of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.226C	Nondisplaced transverse fracture of shaft of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.231A	Displaced oblique fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.231B	Displaced oblique fracture of shaft of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.231C	Displaced oblique fracture of shaft of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.232A	Displaced oblique fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.232B	Displaced oblique fracture of shaft of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.232C	Displaced oblique fracture of shaft of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.233A	Displaced oblique fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.233B	Displaced oblique fracture of shaft of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.233C	Displaced oblique fracture of shaft of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.234A	Nondisplaced oblique fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.234B	Nondisplaced oblique fracture of shaft of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.234C	Nondisplaced oblique fracture of shaft of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.235A	Nondisplaced oblique fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.235B	Nondisplaced oblique fracture of shaft of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.235C	Nondisplaced oblique fracture of shaft of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.236A	Nondisplaced oblique fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.236B	Nondisplaced oblique fracture of shaft of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.236C	Nondisplaced oblique fracture of shaft of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.241A	Displaced spiral fracture of shaft of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.241B	Displaced spiral fracture of shaft of ulna, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.241C	Displaced spiral fracture of shaft of ulna, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.242A	Displaced spiral fracture of shaft of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S52.242B	Displaced spiral fracture of shaft of ulna, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.242C	Displaced spiral fracture of shaft of ulna, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.243A	Displaced spiral fracture of shaft of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.243B	Displaced spiral fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.243C	Displaced spiral fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.244A	Nondisplaced spiral fracture of shaft of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.244B	Nondisplaced spiral fracture of shaft of ulna, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.244C	Nondisplaced spiral fracture of shaft of ulna, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.245A	Nondisplaced spiral fracture of shaft of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.245B	Nondisplaced spiral fracture of shaft of ulna, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.245C	Nondisplaced spiral fracture of shaft of ulna, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.246A	Nondisplaced spiral fracture of shaft of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.246B	Nondisplaced spiral fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.246C	Nondisplaced spiral fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.251A	Displaced comminuted fracture of shaft of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.251B	Displaced comminuted fracture of shaft of ulna, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.251C	Displaced comminuted fracture of shaft of ulna, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.252A	Displaced comminuted fracture of shaft of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.252B	Displaced comminuted fracture of shaft of ulna, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.252C	Displaced comminuted fracture of shaft of ulna, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.253A	Displaced comminuted fracture of shaft of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.253B	Displaced comminuted fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.253C	Displaced comminuted fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.254A	Nondisplaced comminuted fracture of shaft of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S52.254B	Nondisplaced comminuted fracture of shaft of ulna, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.254C	Nondisplaced comminuted fracture of shaft of ulna, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.255A	Nondisplaced comminuted fracture of shaft of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.255B	Nondisplaced comminuted fracture of shaft of ulna, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.255C	Nondisplaced comminuted fracture of shaft of ulna, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.256A	Nondisplaced comminuted fracture of shaft of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.256B	Nondisplaced comminuted fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.256C	Nondisplaced comminuted fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.261A	Displaced segmental fracture of shaft of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.261B	Displaced segmental fracture of shaft of ulna, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.261C	Displaced segmental fracture of shaft of ulna, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.262A	Displaced segmental fracture of shaft of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.262B	Displaced segmental fracture of shaft of ulna, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.262C	Displaced segmental fracture of shaft of ulna, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.263A	Displaced segmental fracture of shaft of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.263B	Displaced segmental fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.263C	Displaced segmental fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.264A	Nondisplaced segmental fracture of shaft of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.264B	Nondisplaced segmental fracture of shaft of ulna, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.264C	Nondisplaced segmental fracture of shaft of ulna, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.265A	Nondisplaced segmental fracture of shaft of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.265B	Nondisplaced segmental fracture of shaft of ulna, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.265C	Nondisplaced segmental fracture of shaft of ulna, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.266A	Nondisplaced segmental fracture of shaft of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S52.266B	Nondisplaced segmental fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.266C	Nondisplaced segmental fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.271A	Monteggia's fracture of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.271B	Monteggia's fracture of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.271C	Monteggia's fracture of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.272A	Monteggia's fracture of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.272B	Monteggia's fracture of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.272C	Monteggia's fracture of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.279A	Monteggia's fracture of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.279B	Monteggia's fracture of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.279C	Monteggia's fracture of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.281A	Bent bone of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.281B	Bent bone of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.281C	Bent bone of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.282A	Bent bone of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.282B	Bent bone of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.282C	Bent bone of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.283A	Bent bone of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.283B	Bent bone of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.283C	Bent bone of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.291A	Other fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.291B	Other fracture of shaft of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.291C	Other fracture of shaft of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.292A	Other fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.292B	Other fracture of shaft of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.292C	Other fracture of shaft of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.299A	Other fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.299B	Other fracture of shaft of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.299C	Other fracture of shaft of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.301A	Unspecified fracture of shaft of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.301B	Unspecified fracture of shaft of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.301C	Unspecified fracture of shaft of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.302A	Unspecified fracture of shaft of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.302B	Unspecified fracture of shaft of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S52.302C	Unspecified fracture of shaft of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.309A	Unspecified fracture of shaft of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.309B	Unspecified fracture of shaft of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.309C	Unspecified fracture of shaft of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.311A	Greenstick fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.312A	Greenstick fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.319A	Greenstick fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.321A	Displaced transverse fracture of shaft of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.321B	Displaced transverse fracture of shaft of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.321C	Displaced transverse fracture of shaft of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.322A	Displaced transverse fracture of shaft of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.322B	Displaced transverse fracture of shaft of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.322C	Displaced transverse fracture of shaft of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.323A	Displaced transverse fracture of shaft of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.323B	Displaced transverse fracture of shaft of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.323C	Displaced transverse fracture of shaft of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.324A	Nondisplaced transverse fracture of shaft of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.324B	Nondisplaced transverse fracture of shaft of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.324C	Nondisplaced transverse fracture of shaft of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.325A	Nondisplaced transverse fracture of shaft of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.325B	Nondisplaced transverse fracture of shaft of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.325C	Nondisplaced transverse fracture of shaft of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.326A	Nondisplaced transverse fracture of shaft of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.326B	Nondisplaced transverse fracture of shaft of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.326C	Nondisplaced transverse fracture of shaft of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S52.331A	Displaced oblique fracture of shaft of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.331B	Displaced oblique fracture of shaft of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.331C	Displaced oblique fracture of shaft of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.332A	Displaced oblique fracture of shaft of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.332B	Displaced oblique fracture of shaft of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.332C	Displaced oblique fracture of shaft of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.333A	Displaced oblique fracture of shaft of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.333B	Displaced oblique fracture of shaft of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.333C	Displaced oblique fracture of shaft of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.334A	Nondisplaced oblique fracture of shaft of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.334B	Nondisplaced oblique fracture of shaft of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.334C	Nondisplaced oblique fracture of shaft of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.335A	Nondisplaced oblique fracture of shaft of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.335B	Nondisplaced oblique fracture of shaft of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.335C	Nondisplaced oblique fracture of shaft of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.336A	Nondisplaced oblique fracture of shaft of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.336B	Nondisplaced oblique fracture of shaft of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.336C	Nondisplaced oblique fracture of shaft of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.341A	Displaced spiral fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.341B	Displaced spiral fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.341C	Displaced spiral fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.342A	Displaced spiral fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.342B	Displaced spiral fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.342C	Displaced spiral fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.343A	Displaced spiral fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S52.343B	Displaced spiral fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.343C	Displaced spiral fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.344A	Nondisplaced spiral fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.344B	Nondisplaced spiral fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.344C	Nondisplaced spiral fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.345A	Nondisplaced spiral fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.345B	Nondisplaced spiral fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.345C	Nondisplaced spiral fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.346A	Nondisplaced spiral fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.346B	Nondisplaced spiral fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.346C	Nondisplaced spiral fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.351A	Displaced comminuted fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.351B	Displaced comminuted fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.351C	Displaced comminuted fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.352A	Displaced comminuted fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.352B	Displaced comminuted fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.352C	Displaced comminuted fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.353A	Displaced comminuted fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.353B	Displaced comminuted fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.353C	Displaced comminuted fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.354A	Nondisplaced comminuted fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.354B	Nondisplaced comminuted fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.354C	Nondisplaced comminuted fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.355A	Nondisplaced comminuted fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S52.355B	Nondisplaced comminuted fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.355C	Nondisplaced comminuted fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.356A	Nondisplaced comminuted fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.356B	Nondisplaced comminuted fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.356C	Nondisplaced comminuted fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.361A	Displaced segmental fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.361B	Displaced segmental fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.361C	Displaced segmental fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.362A	Displaced segmental fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.362B	Displaced segmental fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.362C	Displaced segmental fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.363A	Displaced segmental fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.363B	Displaced segmental fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.363C	Displaced segmental fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.364A	Nondisplaced segmental fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.364B	Nondisplaced segmental fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.364C	Nondisplaced segmental fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.365A	Nondisplaced segmental fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.365B	Nondisplaced segmental fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.365C	Nondisplaced segmental fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.366A	Nondisplaced segmental fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.366B	Nondisplaced segmental fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.366C	Nondisplaced segmental fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.371A	Galeazzi's fracture of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.371B	Galeazzi's fracture of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S52.371C	Galeazzi's fracture of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.372A	Galeazzi's fracture of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.372B	Galeazzi's fracture of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.372C	Galeazzi's fracture of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.379A	Galeazzi's fracture of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.379B	Galeazzi's fracture of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.379C	Galeazzi's fracture of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.381A	Bent bone of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.381B	Bent bone of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.381C	Bent bone of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.382A	Bent bone of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.382B	Bent bone of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.382C	Bent bone of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.389A	Bent bone of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.389B	Bent bone of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.389C	Bent bone of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.391A	Other fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.391B	Other fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.391C	Other fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.392A	Other fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.392B	Other fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.392C	Other fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.399A	Other fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.399B	Other fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.399C	Other fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.501A	Unspecified fracture of the lower end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.501B	Unspecified fracture of the lower end of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.501C	Unspecified fracture of the lower end of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.502A	Unspecified fracture of the lower end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.502B	Unspecified fracture of the lower end of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.502C	Unspecified fracture of the lower end of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S52.509A	Unspecified fracture of the lower end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.509B	Unspecified fracture of the lower end of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.509C	Unspecified fracture of the lower end of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.511A	Displaced fracture of right radial styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.511B	Displaced fracture of right radial styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.511C	Displaced fracture of right radial styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.512A	Displaced fracture of left radial styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.512B	Displaced fracture of left radial styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.512C	Displaced fracture of left radial styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.513A	Displaced fracture of unspecified radial styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.513B	Displaced fracture of unspecified radial styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.513C	Displaced fracture of unspecified radial styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.514A	Nondisplaced fracture of right radial styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.514B	Nondisplaced fracture of right radial styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.514C	Nondisplaced fracture of right radial styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.515A	Nondisplaced fracture of left radial styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.515B	Nondisplaced fracture of left radial styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.515C	Nondisplaced fracture of left radial styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.516A	Nondisplaced fracture of unspecified radial styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.516B	Nondisplaced fracture of unspecified radial styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.516C	Nondisplaced fracture of unspecified radial styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.521A	Torus fracture of lower end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.522A	Torus fracture of lower end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.529A	Torus fracture of lower end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.531A	Colles' fracture of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.531B	Colles' fracture of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.531C	Colles' fracture of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S52.532A	Colles' fracture of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.532B	Colles' fracture of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.532C	Colles' fracture of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.539A	Colles' fracture of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.539B	Colles' fracture of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.539C	Colles' fracture of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.541A	Smith's fracture of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.541B	Smith's fracture of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.541C	Smith's fracture of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.542A	Smith's fracture of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.542B	Smith's fracture of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.542C	Smith's fracture of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.549A	Smith's fracture of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.549B	Smith's fracture of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.549C	Smith's fracture of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.551A	Other extraarticular fracture of lower end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.551B	Other extraarticular fracture of lower end of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.551C	Other extraarticular fracture of lower end of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.552A	Other extraarticular fracture of lower end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.552B	Other extraarticular fracture of lower end of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.552C	Other extraarticular fracture of lower end of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.559A	Other extraarticular fracture of lower end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.559B	Other extraarticular fracture of lower end of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.559C	Other extraarticular fracture of lower end of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.561A	Barton's fracture of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.561B	Barton's fracture of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.561C	Barton's fracture of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.562A	Barton's fracture of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.562B	Barton's fracture of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.562C	Barton's fracture of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.569A	Barton's fracture of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.569B	Barton's fracture of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.569C	Barton's fracture of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.571A	Other intraarticular fracture of lower end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.571B	Other intraarticular fracture of lower end of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.571C	Other intraarticular fracture of lower end of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.572A	Other intraarticular fracture of lower end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.572B	Other intraarticular fracture of lower end of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.572C	Other intraarticular fracture of lower end of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.579A	Other intraarticular fracture of lower end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.579B	Other intraarticular fracture of lower end of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.579C	Other intraarticular fracture of lower end of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.591A	Other fractures of lower end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.591B	Other fractures of lower end of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.591C	Other fractures of lower end of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.592A	Other fractures of lower end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.592B	Other fractures of lower end of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.592C	Other fractures of lower end of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.599A	Other fractures of lower end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.599B	Other fractures of lower end of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.599C	Other fractures of lower end of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.601A	Unspecified fracture of lower end of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.601B	Unspecified fracture of lower end of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.601C	Unspecified fracture of lower end of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.602A	Unspecified fracture of lower end of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.602B	Unspecified fracture of lower end of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.602C	Unspecified fracture of lower end of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.609A	Unspecified fracture of lower end of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.609B	Unspecified fracture of lower end of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.609C	Unspecified fracture of lower end of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.611A	Displaced fracture of right ulna styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S52.611B	Displaced fracture of right ulna styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.611C	Displaced fracture of right ulna styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.612A	Displaced fracture of left ulna styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.612B	Displaced fracture of left ulna styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.612C	Displaced fracture of left ulna styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.613A	Displaced fracture of unspecified ulna styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.613B	Displaced fracture of unspecified ulna styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.613C	Displaced fracture of unspecified ulna styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.614A	Nondisplaced fracture of right ulna styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.614B	Nondisplaced fracture of right ulna styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.614C	Nondisplaced fracture of right ulna styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.615A	Nondisplaced fracture of left ulna styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.615B	Nondisplaced fracture of left ulna styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.615C	Nondisplaced fracture of left ulna styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.616A	Nondisplaced fracture of unspecified ulna styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.616B	Nondisplaced fracture of unspecified ulna styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.616C	Nondisplaced fracture of unspecified ulna styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.621A	Torus fracture of lower end of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.622A	Torus fracture of lower end of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.629A	Torus fracture of lower end of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.691A	Other fracture of lower end of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.691B	Other fracture of lower end of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.691C	Other fracture of lower end of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.692A	Other fracture of lower end of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.692B	Other fracture of lower end of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.692C	Other fracture of lower end of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.699A	Other fracture of lower end of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.699B	Other fracture of lower end of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S52.699C	Other fracture of lower end of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.90XA	Unspecified fracture of unspecified forearm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.90XB	Unspecified fracture of unspecified forearm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.90XC	Unspecified fracture of unspecified forearm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.91XA	Unspecified fracture of right forearm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.91XB	Unspecified fracture of right forearm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.91XC	Unspecified fracture of right forearm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.92XA	Unspecified fracture of left forearm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.92XB	Unspecified fracture of left forearm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.92XC	Unspecified fracture of left forearm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S59.001A	Unspecified physeal fracture of lower end of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.002A	Unspecified physeal fracture of lower end of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.009A	Unspecified physeal fracture of lower end of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.011A	Salter-Harris Type I physeal fracture of lower end of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.012A	Salter-Harris Type I physeal fracture of lower end of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.019A	Salter-Harris Type I physeal fracture of lower end of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.021A	Salter-Harris Type II physeal fracture of lower end of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.022A	Salter-Harris Type II physeal fracture of lower end of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.029A	Salter-Harris Type II physeal fracture of lower end of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.031A	Salter-Harris Type III physeal fracture of lower end of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.032A	Salter-Harris Type III physeal fracture of lower end of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.039A	Salter-Harris Type III physeal fracture of lower end of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.041A	Salter-Harris Type IV physeal fracture of lower end of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.042A	Salter-Harris Type IV physeal fracture of lower end of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.049A	Salter-Harris Type IV physeal fracture of lower end of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.091A	Other physeal fracture of lower end of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.092A	Other physeal fracture of lower end of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S59.099A	Other physeal fracture of lower end of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.101A	Unspecified physeal fracture of upper end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.102A	Unspecified physeal fracture of upper end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.109A	Unspecified physeal fracture of upper end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.111A	Salter-Harris Type I physeal fracture of upper end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.112A	Salter-Harris Type I physeal fracture of upper end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.119A	Salter-Harris Type I physeal fracture of upper end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.121A	Salter-Harris Type II physeal fracture of upper end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.122A	Salter-Harris Type II physeal fracture of upper end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.129A	Salter-Harris Type II physeal fracture of upper end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.131A	Salter-Harris Type III physeal fracture of upper end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.132A	Salter-Harris Type III physeal fracture of upper end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.139A	Salter-Harris Type III physeal fracture of upper end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.141A	Salter-Harris Type IV physeal fracture of upper end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.142A	Salter-Harris Type IV physeal fracture of upper end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.149A	Salter-Harris Type IV physeal fracture of upper end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.191A	Other physeal fracture of upper end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.192A	Other physeal fracture of upper end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.199A	Other physeal fracture of upper end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.201A	Unspecified physeal fracture of lower end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.202A	Unspecified physeal fracture of lower end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.209A	Unspecified physeal fracture of lower end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.211A	Salter-Harris Type I physeal fracture of lower end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.212A	Salter-Harris Type I physeal fracture of lower end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S59.219A	Salter-Harris Type I physeal fracture of lower end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.221A	Salter-Harris Type II physeal fracture of lower end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.222A	Salter-Harris Type II physeal fracture of lower end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.229A	Salter-Harris Type II physeal fracture of lower end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.231A	Salter-Harris Type III physeal fracture of lower end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.232A	Salter-Harris Type III physeal fracture of lower end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.239A	Salter-Harris Type III physeal fracture of lower end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.241A	Salter-Harris Type IV physeal fracture of lower end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.242A	Salter-Harris Type IV physeal fracture of lower end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.249A	Salter-Harris Type IV physeal fracture of lower end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.291A	Other physeal fracture of lower end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.292A	Other physeal fracture of lower end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.299A	Other physeal fracture of lower end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.001A	Fracture of unspecified part of neck of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.001B	Fracture of unspecified part of neck of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.001C	Fracture of unspecified part of neck of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.002A	Fracture of unspecified part of neck of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.002B	Fracture of unspecified part of neck of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.002C	Fracture of unspecified part of neck of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.009A	Fracture of unspecified part of neck of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.009B	Fracture of unspecified part of neck of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.009C	Fracture of unspecified part of neck of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.011A	Unspecified intracapsular fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.011B	Unspecified intracapsular fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.011C	Unspecified intracapsular fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S72.012A	Unspecified intracapsular fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.012B	Unspecified intracapsular fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.012C	Unspecified intracapsular fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.019A	Unspecified intracapsular fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.019B	Unspecified intracapsular fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.019C	Unspecified intracapsular fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.021A	Displaced fracture of epiphysis (separation) (upper) of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.021B	Displaced fracture of epiphysis (separation) (upper) of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.021C	Displaced fracture of epiphysis (separation) (upper) of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.022A	Displaced fracture of epiphysis (separation) (upper) of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.022B	Displaced fracture of epiphysis (separation) (upper) of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.022C	Displaced fracture of epiphysis (separation) (upper) of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.023A	Displaced fracture of epiphysis (separation) (upper) of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.023B	Displaced fracture of epiphysis (separation) (upper) of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.023C	Displaced fracture of epiphysis (separation) (upper) of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.024A	Nondisplaced fracture of epiphysis (separation) (upper) of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.024B	Nondisplaced fracture of epiphysis (separation) (upper) of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.024C	Nondisplaced fracture of epiphysis (separation) (upper) of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.025A	Nondisplaced fracture of epiphysis (separation) (upper) of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.025B	Nondisplaced fracture of epiphysis (separation) (upper) of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.025C	Nondisplaced fracture of epiphysis (separation) (upper) of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.026A	Nondisplaced fracture of epiphysis (separation) (upper) of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.026B	Nondisplaced fracture of epiphysis (separation) (upper) of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.026C	Nondisplaced fracture of epiphysis (separation) (upper) of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.031A	Displaced midcervical fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S72.031B	Displaced midcervical fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.031C	Displaced midcervical fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.032A	Displaced midcervical fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.032B	Displaced midcervical fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.032C	Displaced midcervical fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.033A	Displaced midcervical fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.033B	Displaced midcervical fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.033C	Displaced midcervical fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.034A	Nondisplaced midcervical fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.034B	Nondisplaced midcervical fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.034C	Nondisplaced midcervical fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.035A	Nondisplaced midcervical fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.035B	Nondisplaced midcervical fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.035C	Nondisplaced midcervical fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.036A	Nondisplaced midcervical fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.036B	Nondisplaced midcervical fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.036C	Nondisplaced midcervical fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.041A	Displaced fracture of base of neck of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.041B	Displaced fracture of base of neck of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.041C	Displaced fracture of base of neck of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.042A	Displaced fracture of base of neck of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.042B	Displaced fracture of base of neck of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.042C	Displaced fracture of base of neck of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.043A	Displaced fracture of base of neck of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.043B	Displaced fracture of base of neck of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.043C	Displaced fracture of base of neck of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S72.044A	Nondisplaced fracture of base of neck of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.044B	Nondisplaced fracture of base of neck of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.044C	Nondisplaced fracture of base of neck of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.045A	Nondisplaced fracture of base of neck of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.045B	Nondisplaced fracture of base of neck of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.045C	Nondisplaced fracture of base of neck of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.046A	Nondisplaced fracture of base of neck of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.046B	Nondisplaced fracture of base of neck of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.046C	Nondisplaced fracture of base of neck of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.051A	Unspecified fracture of head of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.051B	Unspecified fracture of head of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.051C	Unspecified fracture of head of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.052A	Unspecified fracture of head of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.052B	Unspecified fracture of head of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.052C	Unspecified fracture of head of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.059A	Unspecified fracture of head of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.059B	Unspecified fracture of head of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.059C	Unspecified fracture of head of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.061A	Displaced articular fracture of head of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.061B	Displaced articular fracture of head of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.061C	Displaced articular fracture of head of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.062A	Displaced articular fracture of head of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.062B	Displaced articular fracture of head of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.062C	Displaced articular fracture of head of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.063A	Displaced articular fracture of head of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S72.063B	Displaced articular fracture of head of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.063C	Displaced articular fracture of head of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.064A	Nondisplaced articular fracture of head of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.064B	Nondisplaced articular fracture of head of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.064C	Nondisplaced articular fracture of head of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.065A	Nondisplaced articular fracture of head of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.065B	Nondisplaced articular fracture of head of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.065C	Nondisplaced articular fracture of head of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.066A	Nondisplaced articular fracture of head of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.066B	Nondisplaced articular fracture of head of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.066C	Nondisplaced articular fracture of head of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.091A	Other fracture of head and neck of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.091B	Other fracture of head and neck of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.091C	Other fracture of head and neck of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.092A	Other fracture of head and neck of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.092B	Other fracture of head and neck of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.092C	Other fracture of head and neck of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.099A	Other fracture of head and neck of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.099B	Other fracture of head and neck of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.099C	Other fracture of head and neck of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.101A	Unspecified trochanteric fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.101B	Unspecified trochanteric fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.101C	Unspecified trochanteric fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.102A	Unspecified trochanteric fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.102B	Unspecified trochanteric fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.102C	Unspecified trochanteric fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S72.109A	Unspecified trochanteric fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.109B	Unspecified trochanteric fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.109C	Unspecified trochanteric fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.111A	Displaced fracture of greater trochanter of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.111B	Displaced fracture of greater trochanter of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.111C	Displaced fracture of greater trochanter of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.112A	Displaced fracture of greater trochanter of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.112B	Displaced fracture of greater trochanter of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.112C	Displaced fracture of greater trochanter of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.113A	Displaced fracture of greater trochanter of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.113B	Displaced fracture of greater trochanter of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.113C	Displaced fracture of greater trochanter of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.114A	Nondisplaced fracture of greater trochanter of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.114B	Nondisplaced fracture of greater trochanter of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.114C	Nondisplaced fracture of greater trochanter of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.115A	Nondisplaced fracture of greater trochanter of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.115B	Nondisplaced fracture of greater trochanter of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.115C	Nondisplaced fracture of greater trochanter of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.116A	Nondisplaced fracture of greater trochanter of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.116B	Nondisplaced fracture of greater trochanter of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.116C	Nondisplaced fracture of greater trochanter of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.121A	Displaced fracture of lesser trochanter of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.121B	Displaced fracture of lesser trochanter of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.121C	Displaced fracture of lesser trochanter of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S72.122A	Displaced fracture of lesser trochanter of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.122B	Displaced fracture of lesser trochanter of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.122C	Displaced fracture of lesser trochanter of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.123A	Displaced fracture of lesser trochanter of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.123B	Displaced fracture of lesser trochanter of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.123C	Displaced fracture of lesser trochanter of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.124A	Nondisplaced fracture of lesser trochanter of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.124B	Nondisplaced fracture of lesser trochanter of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.124C	Nondisplaced fracture of lesser trochanter of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.125A	Nondisplaced fracture of lesser trochanter of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.125B	Nondisplaced fracture of lesser trochanter of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.125C	Nondisplaced fracture of lesser trochanter of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.126A	Nondisplaced fracture of lesser trochanter of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.126B	Nondisplaced fracture of lesser trochanter of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.126C	Nondisplaced fracture of lesser trochanter of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.131A	Displaced apophyseal fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.131B	Displaced apophyseal fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.131C	Displaced apophyseal fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.132A	Displaced apophyseal fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.132B	Displaced apophyseal fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.132C	Displaced apophyseal fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.133A	Displaced apophyseal fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.133B	Displaced apophyseal fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.133C	Displaced apophyseal fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.134A	Nondisplaced apophyseal fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S72.134B	Nondisplaced apophyseal fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.134C	Nondisplaced apophyseal fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.135A	Nondisplaced apophyseal fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.135B	Nondisplaced apophyseal fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.135C	Nondisplaced apophyseal fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.136A	Nondisplaced apophyseal fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.136B	Nondisplaced apophyseal fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.136C	Nondisplaced apophyseal fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.141A	Displaced intertrochanteric fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.141B	Displaced intertrochanteric fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.141C	Displaced intertrochanteric fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.142A	Displaced intertrochanteric fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.142B	Displaced intertrochanteric fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.142C	Displaced intertrochanteric fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.143A	Displaced intertrochanteric fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.143B	Displaced intertrochanteric fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.143C	Displaced intertrochanteric fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.144A	Nondisplaced intertrochanteric fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.144B	Nondisplaced intertrochanteric fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.144C	Nondisplaced intertrochanteric fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.145A	Nondisplaced intertrochanteric fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.145B	Nondisplaced intertrochanteric fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.145C	Nondisplaced intertrochanteric fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.146A	Nondisplaced intertrochanteric fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S72.146B	Nondisplaced intertrochanteric fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.146C	Nondisplaced intertrochanteric fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.21XA	Displaced subtrochanteric fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.21XB	Displaced subtrochanteric fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.21XC	Displaced subtrochanteric fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.22XA	Displaced subtrochanteric fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.22XB	Displaced subtrochanteric fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.22XC	Displaced subtrochanteric fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.23XA	Displaced subtrochanteric fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.23XB	Displaced subtrochanteric fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.23XC	Displaced subtrochanteric fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.24XA	Nondisplaced subtrochanteric fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.24XB	Nondisplaced subtrochanteric fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.24XC	Nondisplaced subtrochanteric fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.25XA	Nondisplaced subtrochanteric fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.25XB	Nondisplaced subtrochanteric fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.25XC	Nondisplaced subtrochanteric fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.26XA	Nondisplaced subtrochanteric fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.26XB	Nondisplaced subtrochanteric fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.26XC	Nondisplaced subtrochanteric fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S79.001A	Unspecified physeal fracture of upper end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.002A	Unspecified physeal fracture of upper end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.009A	Unspecified physeal fracture of upper end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.011A	Salter-Harris Type I physeal fracture of upper end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
S79.012A	Salter-Harris Type I physeal fracture of upper end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.019A	Salter-Harris Type I physeal fracture of upper end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.091A	Other physeal fracture of upper end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.092A	Other physeal fracture of upper end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.099A	Other physeal fracture of upper end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
OPBH0ZZ	Excision of Right Radius, Open Approach	ICD-10-PCS	Procedure
OPBJ0ZZ	Excision of Left Radius, Open Approach	ICD-10-PCS	Procedure
OPBK0ZZ	Excision of Right Ulna, Open Approach	ICD-10-PCS	Procedure
OPBL0ZZ	Excision of Left Ulna, Open Approach	ICD-10-PCS	Procedure
OPH004Z	Insertion of Internal Fixation Device into Sternum, Open Approach	ICD-10-PCS	Procedure
OPH034Z	Insertion of Internal Fixation Device into Sternum, Percutaneous Approach	ICD-10-PCS	Procedure
OPH044Z	Insertion of Internal Fixation Device into Sternum, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPH104Z	Insertion of Internal Fixation Device into 1 to 2 Ribs, Open Approach	ICD-10-PCS	Procedure
OPH134Z	Insertion of Internal Fixation Device into 1 to 2 Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
OPH144Z	Insertion of Internal Fixation Device into 1 to 2 Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPH204Z	Insertion of Internal Fixation Device into 3 or More Ribs, Open Approach	ICD-10-PCS	Procedure
OPH234Z	Insertion of Internal Fixation Device into 3 or More Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
OPH244Z	Insertion of Internal Fixation Device into 3 or More Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPH504Z	Insertion of Internal Fixation Device into Right Scapula, Open Approach	ICD-10-PCS	Procedure
OPH534Z	Insertion of Internal Fixation Device into Right Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
OPH544Z	Insertion of Internal Fixation Device into Right Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPH604Z	Insertion of Internal Fixation Device into Left Scapula, Open Approach	ICD-10-PCS	Procedure
OPH634Z	Insertion of Internal Fixation Device into Left Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
OPH644Z	Insertion of Internal Fixation Device into Left Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPH704Z	Insertion of Internal Fixation Device into Right Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
OPH734Z	Insertion of Internal Fixation Device into Right Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
OPH744Z	Insertion of Internal Fixation Device into Right Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPH804Z	Insertion of Internal Fixation Device into Left Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
OPH834Z	Insertion of Internal Fixation Device into Left Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
OPH844Z	Insertion of Internal Fixation Device into Left Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPH904Z	Insertion of Internal Fixation Device into Right Clavicle, Open Approach	ICD-10-PCS	Procedure
OPH934Z	Insertion of Internal Fixation Device into Right Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
OPH944Z	Insertion of Internal Fixation Device into Right Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHB04Z	Insertion of Internal Fixation Device into Left Clavicle, Open Approach	ICD-10-PCS	Procedure
OPHB34Z	Insertion of Internal Fixation Device into Left Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
OPHB44Z	Insertion of Internal Fixation Device into Left Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHH04Z	Insertion of Internal Fixation Device into Right Radius, Open Approach	ICD-10-PCS	Procedure
OPHH05Z	Insertion of External Fixation Device into Right Radius, Open Approach	ICD-10-PCS	Procedure
OPHH06Z	Insertion of Intramedullary Internal Fixation Device into Right Radius, Open Approach	ICD-10-PCS	Procedure
OPHH0BZ	Insertion of Monoplanar External Fixation Device into Right Radius, Open Approach	ICD-10-PCS	Procedure
OPHH0CZ	Insertion of Ring External Fixation Device into Right Radius, Open Approach	ICD-10-PCS	Procedure
OPHH0DZ	Insertion of Hybrid External Fixation Device into Right Radius, Open Approach	ICD-10-PCS	Procedure
OPHH34Z	Insertion of Internal Fixation Device into Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPHH35Z	Insertion of External Fixation Device into Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPHH36Z	Insertion of Intramedullary Internal Fixation Device into Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPHH3BZ	Insertion of Monoplanar External Fixation Device into Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPHH3CZ	Insertion of Ring External Fixation Device into Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPHH3DZ	Insertion of Hybrid External Fixation Device into Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPHH44Z	Insertion of Internal Fixation Device into Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHH45Z	Insertion of External Fixation Device into Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHH46Z	Insertion of Intramedullary Internal Fixation Device into Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHH4BZ	Insertion of Monoplanar External Fixation Device into Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHH4CZ	Insertion of Ring External Fixation Device into Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHH4DZ	Insertion of Hybrid External Fixation Device into Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHJ04Z	Insertion of Internal Fixation Device into Left Radius, Open Approach	ICD-10-PCS	Procedure
OPHJ05Z	Insertion of External Fixation Device into Left Radius, Open Approach	ICD-10-PCS	Procedure
OPHJ06Z	Insertion of Intramedullary Internal Fixation Device into Left Radius, Open Approach	ICD-10-PCS	Procedure
OPHJ0BZ	Insertion of Monoplanar External Fixation Device into Left Radius, Open Approach	ICD-10-PCS	Procedure
OPHJ0CZ	Insertion of Ring External Fixation Device into Left Radius, Open Approach	ICD-10-PCS	Procedure
OPHJ0DZ	Insertion of Hybrid External Fixation Device into Left Radius, Open Approach	ICD-10-PCS	Procedure
OPHJ34Z	Insertion of Internal Fixation Device into Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPHJ35Z	Insertion of External Fixation Device into Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPHJ36Z	Insertion of Intramedullary Internal Fixation Device into Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPHJ3BZ	Insertion of Monoplanar External Fixation Device into Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPHJ3CZ	Insertion of Ring External Fixation Device into Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPHJ3DZ	Insertion of Hybrid External Fixation Device into Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPHJ44Z	Insertion of Internal Fixation Device into Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHJ45Z	Insertion of External Fixation Device into Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
OPHJ46Z	Insertion of Intramedullary Internal Fixation Device into Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHJ4BZ	Insertion of Monoplanar External Fixation Device into Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHJ4CZ	Insertion of Ring External Fixation Device into Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHJ4DZ	Insertion of Hybrid External Fixation Device into Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHK04Z	Insertion of Internal Fixation Device into Right Ulna, Open Approach	ICD-10-PCS	Procedure
OPHK05Z	Insertion of External Fixation Device into Right Ulna, Open Approach	ICD-10-PCS	Procedure
OPHK06Z	Insertion of Intramedullary Internal Fixation Device into Right Ulna, Open Approach	ICD-10-PCS	Procedure
OPHK0BZ	Insertion of Monoplanar External Fixation Device into Right Ulna, Open Approach	ICD-10-PCS	Procedure
OPHK0CZ	Insertion of Ring External Fixation Device into Right Ulna, Open Approach	ICD-10-PCS	Procedure
OPHK0DZ	Insertion of Hybrid External Fixation Device into Right Ulna, Open Approach	ICD-10-PCS	Procedure
OPHK34Z	Insertion of Internal Fixation Device into Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPHK35Z	Insertion of External Fixation Device into Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPHK36Z	Insertion of Intramedullary Internal Fixation Device into Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPHK3BZ	Insertion of Monoplanar External Fixation Device into Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPHK3CZ	Insertion of Ring External Fixation Device into Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPHK3DZ	Insertion of Hybrid External Fixation Device into Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPHK44Z	Insertion of Internal Fixation Device into Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHK45Z	Insertion of External Fixation Device into Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHK46Z	Insertion of Intramedullary Internal Fixation Device into Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHK4BZ	Insertion of Monoplanar External Fixation Device into Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHK4CZ	Insertion of Ring External Fixation Device into Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHK4DZ	Insertion of Hybrid External Fixation Device into Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHL04Z	Insertion of Internal Fixation Device into Left Ulna, Open Approach	ICD-10-PCS	Procedure
OPHL05Z	Insertion of External Fixation Device into Left Ulna, Open Approach	ICD-10-PCS	Procedure
OPHL06Z	Insertion of Intramedullary Internal Fixation Device into Left Ulna, Open Approach	ICD-10-PCS	Procedure
OPHL0BZ	Insertion of Monoplanar External Fixation Device into Left Ulna, Open Approach	ICD-10-PCS	Procedure
OPHL0CZ	Insertion of Ring External Fixation Device into Left Ulna, Open Approach	ICD-10-PCS	Procedure
OPHL0DZ	Insertion of Hybrid External Fixation Device into Left Ulna, Open Approach	ICD-10-PCS	Procedure
OPHL34Z	Insertion of Internal Fixation Device into Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPHL35Z	Insertion of External Fixation Device into Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPHL36Z	Insertion of Intramedullary Internal Fixation Device into Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPHL3BZ	Insertion of Monoplanar External Fixation Device into Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPHL3CZ	Insertion of Ring External Fixation Device into Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPHL3DZ	Insertion of Hybrid External Fixation Device into Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
OPHL44Z	Insertion of Internal Fixation Device into Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHL45Z	Insertion of External Fixation Device into Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHL46Z	Insertion of Intramedullary Internal Fixation Device into Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHL4BZ	Insertion of Monoplanar External Fixation Device into Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHL4CZ	Insertion of Ring External Fixation Device into Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPHL4DZ	Insertion of Hybrid External Fixation Device into Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPN00ZZ	Release Sternum, Open Approach	ICD-10-PCS	Procedure
OPN03ZZ	Release Sternum, Percutaneous Approach	ICD-10-PCS	Procedure
OPN04ZZ	Release Sternum, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPN10ZZ	Release 1 to 2 Ribs, Open Approach	ICD-10-PCS	Procedure
OPN13ZZ	Release 1 to 2 Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
OPN14ZZ	Release 1 to 2 Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPN20ZZ	Release 3 or More Ribs, Open Approach	ICD-10-PCS	Procedure
OPN23ZZ	Release 3 or More Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
OPN24ZZ	Release 3 or More Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPN50ZZ	Release Right Scapula, Open Approach	ICD-10-PCS	Procedure
OPN53ZZ	Release Right Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
OPN54ZZ	Release Right Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPN60ZZ	Release Left Scapula, Open Approach	ICD-10-PCS	Procedure
OPN63ZZ	Release Left Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
OPN64ZZ	Release Left Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPN70ZZ	Release Right Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
OPN73ZZ	Release Right Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
OPN74ZZ	Release Right Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPN80ZZ	Release Left Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
OPN83ZZ	Release Left Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
OPN84ZZ	Release Left Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPN90ZZ	Release Right Clavicle, Open Approach	ICD-10-PCS	Procedure
OPN93ZZ	Release Right Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
OPN94ZZ	Release Right Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPNB0ZZ	Release Left Clavicle, Open Approach	ICD-10-PCS	Procedure
OPNB3ZZ	Release Left Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
OPNB4ZZ	Release Left Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPNH0ZZ	Release Right Radius, Open Approach	ICD-10-PCS	Procedure
OPNH3ZZ	Release Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPNH4ZZ	Release Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPNJ0ZZ	Release Left Radius, Open Approach	ICD-10-PCS	Procedure
OPNJ3ZZ	Release Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPNJ4ZZ	Release Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPNK0ZZ	Release Right Ulna, Open Approach	ICD-10-PCS	Procedure
OPNK3ZZ	Release Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPNK4ZZ	Release Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPNL0ZZ	Release Left Ulna, Open Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
OPNL3ZZ	Release Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPNL4ZZ	Release Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP004Z	Removal of Internal Fixation Device from Sternum, Open Approach	ICD-10-PCS	Procedure
OPP007Z	Removal of Autologous Tissue Substitute from Sternum, Open Approach	ICD-10-PCS	Procedure
OPP00JZ	Removal of Synthetic Substitute from Sternum, Open Approach	ICD-10-PCS	Procedure
OPP00KZ	Removal of Nonautologous Tissue Substitute from Sternum, Open Approach	ICD-10-PCS	Procedure
OPP034Z	Removal of Internal Fixation Device from Sternum, Percutaneous Approach	ICD-10-PCS	Procedure
OPP037Z	Removal of Autologous Tissue Substitute from Sternum, Percutaneous Approach	ICD-10-PCS	Procedure
OPP03JZ	Removal of Synthetic Substitute from Sternum, Percutaneous Approach	ICD-10-PCS	Procedure
OPP03KZ	Removal of Nonautologous Tissue Substitute from Sternum, Percutaneous Approach	ICD-10-PCS	Procedure
OPP044Z	Removal of Internal Fixation Device from Sternum, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP047Z	Removal of Autologous Tissue Substitute from Sternum, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP04JZ	Removal of Synthetic Substitute from Sternum, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP04KZ	Removal of Nonautologous Tissue Substitute from Sternum, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP104Z	Removal of Internal Fixation Device from 1 to 2 Ribs, Open Approach	ICD-10-PCS	Procedure
OPP107Z	Removal of Autologous Tissue Substitute from 1 to 2 Ribs, Open Approach	ICD-10-PCS	Procedure
OPP10JZ	Removal of Synthetic Substitute from 1 to 2 Ribs, Open Approach	ICD-10-PCS	Procedure
OPP10KZ	Removal of Nonautologous Tissue Substitute from 1 to 2 Ribs, Open Approach	ICD-10-PCS	Procedure
OPP134Z	Removal of Internal Fixation Device from 1 to 2 Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
OPP137Z	Removal of Autologous Tissue Substitute from 1 to 2 Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
OPP13JZ	Removal of Synthetic Substitute from 1 to 2 Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
OPP13KZ	Removal of Nonautologous Tissue Substitute from 1 to 2 Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
OPP144Z	Removal of Internal Fixation Device from 1 to 2 Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP147Z	Removal of Autologous Tissue Substitute from 1 to 2 Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP14JZ	Removal of Synthetic Substitute from 1 to 2 Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP14KZ	Removal of Nonautologous Tissue Substitute from 1 to 2 Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP204Z	Removal of Internal Fixation Device from 3 or More Ribs, Open Approach	ICD-10-PCS	Procedure
OPP207Z	Removal of Autologous Tissue Substitute from 3 or More Ribs, Open Approach	ICD-10-PCS	Procedure
OPP20JZ	Removal of Synthetic Substitute from 3 or More Ribs, Open Approach	ICD-10-PCS	Procedure
OPP20KZ	Removal of Nonautologous Tissue Substitute from 3 or More Ribs, Open Approach	ICD-10-PCS	Procedure
OPP234Z	Removal of Internal Fixation Device from 3 or More Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
OPP237Z	Removal of Autologous Tissue Substitute from 3 or More Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
OPP23JZ	Removal of Synthetic Substitute from 3 or More Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
OPP23KZ	Removal of Nonautologous Tissue Substitute from 3 or More Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
OPP244Z	Removal of Internal Fixation Device from 3 or More Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP247Z	Removal of Autologous Tissue Substitute from 3 or More Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP24JZ	Removal of Synthetic Substitute from 3 or More Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
OPP24KZ	Removal of Nonautologous Tissue Substitute from 3 or More Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP504Z	Removal of Internal Fixation Device from Right Scapula, Open Approach	ICD-10-PCS	Procedure
OPP507Z	Removal of Autologous Tissue Substitute from Right Scapula, Open Approach	ICD-10-PCS	Procedure
OPP50JZ	Removal of Synthetic Substitute from Right Scapula, Open Approach	ICD-10-PCS	Procedure
OPP50KZ	Removal of Nonautologous Tissue Substitute from Right Scapula, Open Approach	ICD-10-PCS	Procedure
OPP534Z	Removal of Internal Fixation Device from Right Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
OPP537Z	Removal of Autologous Tissue Substitute from Right Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
OPP53JZ	Removal of Synthetic Substitute from Right Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
OPP53KZ	Removal of Nonautologous Tissue Substitute from Right Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
OPP544Z	Removal of Internal Fixation Device from Right Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP547Z	Removal of Autologous Tissue Substitute from Right Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP54JZ	Removal of Synthetic Substitute from Right Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP54KZ	Removal of Nonautologous Tissue Substitute from Right Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP604Z	Removal of Internal Fixation Device from Left Scapula, Open Approach	ICD-10-PCS	Procedure
OPP607Z	Removal of Autologous Tissue Substitute from Left Scapula, Open Approach	ICD-10-PCS	Procedure
OPP60JZ	Removal of Synthetic Substitute from Left Scapula, Open Approach	ICD-10-PCS	Procedure
OPP60KZ	Removal of Nonautologous Tissue Substitute from Left Scapula, Open Approach	ICD-10-PCS	Procedure
OPP634Z	Removal of Internal Fixation Device from Left Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
OPP637Z	Removal of Autologous Tissue Substitute from Left Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
OPP63JZ	Removal of Synthetic Substitute from Left Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
OPP63KZ	Removal of Nonautologous Tissue Substitute from Left Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
OPP644Z	Removal of Internal Fixation Device from Left Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP647Z	Removal of Autologous Tissue Substitute from Left Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP64JZ	Removal of Synthetic Substitute from Left Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP64KZ	Removal of Nonautologous Tissue Substitute from Left Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP704Z	Removal of Internal Fixation Device from Right Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
OPP707Z	Removal of Autologous Tissue Substitute from Right Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
OPP70JZ	Removal of Synthetic Substitute from Right Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
OPP70KZ	Removal of Nonautologous Tissue Substitute from Right Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
OPP734Z	Removal of Internal Fixation Device from Right Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
OPP737Z	Removal of Autologous Tissue Substitute from Right Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
OPP73JZ	Removal of Synthetic Substitute from Right Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
OPP73KZ	Removal of Nonautologous Tissue Substitute from Right Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
OPP744Z	Removal of Internal Fixation Device from Right Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP747Z	Removal of Autologous Tissue Substitute from Right Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP74JZ	Removal of Synthetic Substitute from Right Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP74KZ	Removal of Nonautologous Tissue Substitute from Right Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP804Z	Removal of Internal Fixation Device from Left Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
OPP807Z	Removal of Autologous Tissue Substitute from Left Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
OPP80JZ	Removal of Synthetic Substitute from Left Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
OPP80KZ	Removal of Nonautologous Tissue Substitute from Left Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
OPP834Z	Removal of Internal Fixation Device from Left Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
OPP837Z	Removal of Autologous Tissue Substitute from Left Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
OPP83JZ	Removal of Synthetic Substitute from Left Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
OPP83KZ	Removal of Nonautologous Tissue Substitute from Left Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
OPP844Z	Removal of Internal Fixation Device from Left Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP847Z	Removal of Autologous Tissue Substitute from Left Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP84JZ	Removal of Synthetic Substitute from Left Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP84KZ	Removal of Nonautologous Tissue Substitute from Left Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP904Z	Removal of Internal Fixation Device from Right Clavicle, Open Approach	ICD-10-PCS	Procedure
OPP907Z	Removal of Autologous Tissue Substitute from Right Clavicle, Open Approach	ICD-10-PCS	Procedure
OPP90JZ	Removal of Synthetic Substitute from Right Clavicle, Open Approach	ICD-10-PCS	Procedure
OPP90KZ	Removal of Nonautologous Tissue Substitute from Right Clavicle, Open Approach	ICD-10-PCS	Procedure
OPP934Z	Removal of Internal Fixation Device from Right Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
OPP937Z	Removal of Autologous Tissue Substitute from Right Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
OPP93JZ	Removal of Synthetic Substitute from Right Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
OPP93KZ	Removal of Nonautologous Tissue Substitute from Right Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
OPP944Z	Removal of Internal Fixation Device from Right Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP947Z	Removal of Autologous Tissue Substitute from Right Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP94JZ	Removal of Synthetic Substitute from Right Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP94KZ	Removal of Nonautologous Tissue Substitute from Right Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPPB04Z	Removal of Internal Fixation Device from Left Clavicle, Open Approach	ICD-10-PCS	Procedure
OPPB07Z	Removal of Autologous Tissue Substitute from Left Clavicle, Open Approach	ICD-10-PCS	Procedure
OPPB0JZ	Removal of Synthetic Substitute from Left Clavicle, Open Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
OPPB0KZ	Removal of Nonautologous Tissue Substitute from Left Clavicle, Open Approach	ICD-10-PCS	Procedure
OPPB34Z	Removal of Internal Fixation Device from Left Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
OPPB37Z	Removal of Autologous Tissue Substitute from Left Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
OPPB3JZ	Removal of Synthetic Substitute from Left Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
OPPB3KZ	Removal of Nonautologous Tissue Substitute from Left Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
OPPB44Z	Removal of Internal Fixation Device from Left Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPPB47Z	Removal of Autologous Tissue Substitute from Left Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPPB4JZ	Removal of Synthetic Substitute from Left Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPPB4KZ	Removal of Nonautologous Tissue Substitute from Left Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPPH04Z	Removal of Internal Fixation Device from Right Radius, Open Approach	ICD-10-PCS	Procedure
OPPH05Z	Removal of External Fixation Device from Right Radius, Open Approach	ICD-10-PCS	Procedure
OPPH07Z	Removal of Autologous Tissue Substitute from Right Radius, Open Approach	ICD-10-PCS	Procedure
OPPH0JZ	Removal of Synthetic Substitute from Right Radius, Open Approach	ICD-10-PCS	Procedure
OPPH0KZ	Removal of Nonautologous Tissue Substitute from Right Radius, Open Approach	ICD-10-PCS	Procedure
OPPH34Z	Removal of Internal Fixation Device from Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPPH35Z	Removal of External Fixation Device from Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPPH37Z	Removal of Autologous Tissue Substitute from Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPPH3JZ	Removal of Synthetic Substitute from Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPPH3KZ	Removal of Nonautologous Tissue Substitute from Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPPH44Z	Removal of Internal Fixation Device from Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPPH45Z	Removal of External Fixation Device from Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPPH47Z	Removal of Autologous Tissue Substitute from Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPPH4JZ	Removal of Synthetic Substitute from Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPPH4KZ	Removal of Nonautologous Tissue Substitute from Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPPJ04Z	Removal of Internal Fixation Device from Left Radius, Open Approach	ICD-10-PCS	Procedure
OPPJ05Z	Removal of External Fixation Device from Left Radius, Open Approach	ICD-10-PCS	Procedure
OPPJ07Z	Removal of Autologous Tissue Substitute from Left Radius, Open Approach	ICD-10-PCS	Procedure
OPPJ0JZ	Removal of Synthetic Substitute from Left Radius, Open Approach	ICD-10-PCS	Procedure
OPPJ0KZ	Removal of Nonautologous Tissue Substitute from Left Radius, Open Approach	ICD-10-PCS	Procedure
OPPJ34Z	Removal of Internal Fixation Device from Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPPJ35Z	Removal of External Fixation Device from Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPPJ37Z	Removal of Autologous Tissue Substitute from Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPPJ3JZ	Removal of Synthetic Substitute from Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPPJ3KZ	Removal of Nonautologous Tissue Substitute from Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPPJ44Z	Removal of Internal Fixation Device from Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
OPP45Z	Removal of External Fixation Device from Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP47Z	Removal of Autologous Tissue Substitute from Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP4JZ	Removal of Synthetic Substitute from Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPP4KZ	Removal of Nonautologous Tissue Substitute from Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPPK04Z	Removal of Internal Fixation Device from Right Ulna, Open Approach	ICD-10-PCS	Procedure
OPPK05Z	Removal of External Fixation Device from Right Ulna, Open Approach	ICD-10-PCS	Procedure
OPPK07Z	Removal of Autologous Tissue Substitute from Right Ulna, Open Approach	ICD-10-PCS	Procedure
OPPK0JZ	Removal of Synthetic Substitute from Right Ulna, Open Approach	ICD-10-PCS	Procedure
OPPK0KZ	Removal of Nonautologous Tissue Substitute from Right Ulna, Open Approach	ICD-10-PCS	Procedure
OPPK34Z	Removal of Internal Fixation Device from Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPPK35Z	Removal of External Fixation Device from Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPPK37Z	Removal of Autologous Tissue Substitute from Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPPK3JZ	Removal of Synthetic Substitute from Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPPK3KZ	Removal of Nonautologous Tissue Substitute from Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPPK44Z	Removal of Internal Fixation Device from Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPPK45Z	Removal of External Fixation Device from Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPPK47Z	Removal of Autologous Tissue Substitute from Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPPK4JZ	Removal of Synthetic Substitute from Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPPK4KZ	Removal of Nonautologous Tissue Substitute from Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPPL04Z	Removal of Internal Fixation Device from Left Ulna, Open Approach	ICD-10-PCS	Procedure
OPPL05Z	Removal of External Fixation Device from Left Ulna, Open Approach	ICD-10-PCS	Procedure
OPPL07Z	Removal of Autologous Tissue Substitute from Left Ulna, Open Approach	ICD-10-PCS	Procedure
OPPL0JZ	Removal of Synthetic Substitute from Left Ulna, Open Approach	ICD-10-PCS	Procedure
OPPL0KZ	Removal of Nonautologous Tissue Substitute from Left Ulna, Open Approach	ICD-10-PCS	Procedure
OPPL34Z	Removal of Internal Fixation Device from Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPPL35Z	Removal of External Fixation Device from Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPPL37Z	Removal of Autologous Tissue Substitute from Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPPL3JZ	Removal of Synthetic Substitute from Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPPL3KZ	Removal of Nonautologous Tissue Substitute from Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPPL44Z	Removal of Internal Fixation Device from Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPPL45Z	Removal of External Fixation Device from Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPPL47Z	Removal of Autologous Tissue Substitute from Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPPL4JZ	Removal of Synthetic Substitute from Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPPL4KZ	Removal of Nonautologous Tissue Substitute from Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPQ00ZZ	Repair Sternum, Open Approach	ICD-10-PCS	Procedure
OPQ03ZZ	Repair Sternum, Percutaneous Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0PQ04ZZ	Repair Sternum, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQ0XZZ	Repair Sternum, External Approach	ICD-10-PCS	Procedure
0PQ10ZZ	Repair 1 to 2 Ribs, Open Approach	ICD-10-PCS	Procedure
0PQ13ZZ	Repair 1 to 2 Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
0PQ14ZZ	Repair 1 to 2 Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQ1XZZ	Repair 1 to 2 Ribs, External Approach	ICD-10-PCS	Procedure
0PQ20ZZ	Repair 3 or More Ribs, Open Approach	ICD-10-PCS	Procedure
0PQ23ZZ	Repair 3 or More Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
0PQ24ZZ	Repair 3 or More Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQ2XZZ	Repair 3 or More Ribs, External Approach	ICD-10-PCS	Procedure
0PQ50ZZ	Repair Right Scapula, Open Approach	ICD-10-PCS	Procedure
0PQ53ZZ	Repair Right Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
0PQ54ZZ	Repair Right Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQ5XZZ	Repair Right Scapula, External Approach	ICD-10-PCS	Procedure
0PQ60ZZ	Repair Left Scapula, Open Approach	ICD-10-PCS	Procedure
0PQ63ZZ	Repair Left Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
0PQ64ZZ	Repair Left Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQ6XZZ	Repair Left Scapula, External Approach	ICD-10-PCS	Procedure
0PQ70ZZ	Repair Right Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
0PQ73ZZ	Repair Right Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
0PQ74ZZ	Repair Right Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQ7XZZ	Repair Right Glenoid Cavity, External Approach	ICD-10-PCS	Procedure
0PQ80ZZ	Repair Left Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
0PQ83ZZ	Repair Left Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
0PQ84ZZ	Repair Left Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQ8XZZ	Repair Left Glenoid Cavity, External Approach	ICD-10-PCS	Procedure
0PQ90ZZ	Repair Right Clavicle, Open Approach	ICD-10-PCS	Procedure
0PQ93ZZ	Repair Right Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
0PQ94ZZ	Repair Right Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQ9XZZ	Repair Right Clavicle, External Approach	ICD-10-PCS	Procedure
0PQB0ZZ	Repair Left Clavicle, Open Approach	ICD-10-PCS	Procedure
0PQB3ZZ	Repair Left Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
0PQB4ZZ	Repair Left Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQBXXZZ	Repair Left Clavicle, External Approach	ICD-10-PCS	Procedure
0PQH0ZZ	Repair Right Radius, Open Approach	ICD-10-PCS	Procedure
0PQH3ZZ	Repair Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PQH4ZZ	Repair Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQHXXZZ	Repair Right Radius, External Approach	ICD-10-PCS	Procedure
0PQJ0ZZ	Repair Left Radius, Open Approach	ICD-10-PCS	Procedure
0PQJ3ZZ	Repair Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PQJ4ZZ	Repair Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQJXXZZ	Repair Left Radius, External Approach	ICD-10-PCS	Procedure
0PQK0ZZ	Repair Right Ulna, Open Approach	ICD-10-PCS	Procedure
0PQK3ZZ	Repair Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PQK4ZZ	Repair Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQKXXZZ	Repair Right Ulna, External Approach	ICD-10-PCS	Procedure
0PQL0ZZ	Repair Left Ulna, Open Approach	ICD-10-PCS	Procedure
0PQL3ZZ	Repair Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PQL4ZZ	Repair Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
OPQLXZZ	Repair Left Ulna, External Approach	ICD-10-PCS	Procedure
OPR00JZ	Replacement of Sternum with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPR03JZ	Replacement of Sternum with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPR04JZ	Replacement of Sternum with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPR10JZ	Replacement of 1 to 2 Ribs with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPR13JZ	Replacement of 1 to 2 Ribs with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPR14JZ	Replacement of 1 to 2 Ribs with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPR20JZ	Replacement of 3 or More Ribs with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPR23JZ	Replacement of 3 or More Ribs with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPR24JZ	Replacement of 3 or More Ribs with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPR50JZ	Replacement of Right Scapula with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPR53JZ	Replacement of Right Scapula with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPR54JZ	Replacement of Right Scapula with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPR60JZ	Replacement of Left Scapula with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPR63JZ	Replacement of Left Scapula with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPR64JZ	Replacement of Left Scapula with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPR70JZ	Replacement of Right Glenoid Cavity with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPR73JZ	Replacement of Right Glenoid Cavity with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPR74JZ	Replacement of Right Glenoid Cavity with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPR80JZ	Replacement of Left Glenoid Cavity with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPR83JZ	Replacement of Left Glenoid Cavity with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPR84JZ	Replacement of Left Glenoid Cavity with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPR90JZ	Replacement of Right Clavicle with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPR93JZ	Replacement of Right Clavicle with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPR94JZ	Replacement of Right Clavicle with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPRB0JZ	Replacement of Left Clavicle with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPRB3JZ	Replacement of Left Clavicle with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPRB4JZ	Replacement of Left Clavicle with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPRH0JZ	Replacement of Right Radius with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPRH3JZ	Replacement of Right Radius with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPRH4JZ	Replacement of Right Radius with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPRJ0JZ	Replacement of Left Radius with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPRJ3JZ	Replacement of Left Radius with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPRJ4JZ	Replacement of Left Radius with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPRK0JZ	Replacement of Right Ulna with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPRK3JZ	Replacement of Right Ulna with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
OPRK4JZ	Replacement of Right Ulna with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPRLOJZ	Replacement of Left Ulna with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPRL3JZ	Replacement of Left Ulna with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPRL4JZ	Replacement of Left Ulna with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSH04Z	Reposition Right Radius with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSH05Z	Reposition Right Radius with External Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSH06Z	Reposition Right Radius with Intramedullary Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSH0BZ	Reposition Right Radius with Monoplanar External Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSH0CZ	Reposition Right Radius with Ring External Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSH0DZ	Reposition Right Radius with Hybrid External Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSH0ZZ	Reposition Right Radius, Open Approach	ICD-10-PCS	Procedure
OPSH34Z	Reposition Right Radius with Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSH35Z	Reposition Right Radius with External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSH36Z	Reposition Right Radius with Intramedullary Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSH3BZ	Reposition Right Radius with Monoplanar External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSH3CZ	Reposition Right Radius with Ring External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSH3DZ	Reposition Right Radius with Hybrid External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSH3ZZ	Reposition Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPSH44Z	Reposition Right Radius with Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSH45Z	Reposition Right Radius with External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSH46Z	Reposition Right Radius with Intramedullary Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSH4BZ	Reposition Right Radius with Monoplanar External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSH4CZ	Reposition Right Radius with Ring External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSH4DZ	Reposition Right Radius with Hybrid External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSH4ZZ	Reposition Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSHXZZ	Reposition Right Radius, External Approach	ICD-10-PCS	Procedure
OPSJ04Z	Reposition Left Radius with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSJ05Z	Reposition Left Radius with External Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSJ06Z	Reposition Left Radius with Intramedullary Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSJ0BZ	Reposition Left Radius with Monoplanar External Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSJ0CZ	Reposition Left Radius with Ring External Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSJ0DZ	Reposition Left Radius with Hybrid External Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSJ0ZZ	Reposition Left Radius, Open Approach	ICD-10-PCS	Procedure
OPSJ34Z	Reposition Left Radius with Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSJ35Z	Reposition Left Radius with External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSJ36Z	Reposition Left Radius with Intramedullary Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
OPSJ3BZ	Reposition Left Radius with Monoplanar External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSJ3CZ	Reposition Left Radius with Ring External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSJ3DZ	Reposition Left Radius with Hybrid External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSJ3ZZ	Reposition Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
OPSJ44Z	Reposition Left Radius with Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSJ45Z	Reposition Left Radius with External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSJ46Z	Reposition Left Radius with Intramedullary Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSJ4BZ	Reposition Left Radius with Monoplanar External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSJ4CZ	Reposition Left Radius with Ring External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSJ4DZ	Reposition Left Radius with Hybrid External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSJ4ZZ	Reposition Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSJXZZ	Reposition Left Radius, External Approach	ICD-10-PCS	Procedure
OPSK04Z	Reposition Right Ulna with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSK05Z	Reposition Right Ulna with External Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSK06Z	Reposition Right Ulna with Intramedullary Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSK0BZ	Reposition Right Ulna with Monoplanar External Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSK0CZ	Reposition Right Ulna with Ring External Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSK0DZ	Reposition Right Ulna with Hybrid External Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSK0ZZ	Reposition Right Ulna, Open Approach	ICD-10-PCS	Procedure
OPSK34Z	Reposition Right Ulna with Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSK35Z	Reposition Right Ulna with External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSK36Z	Reposition Right Ulna with Intramedullary Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSK3BZ	Reposition Right Ulna with Monoplanar External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSK3CZ	Reposition Right Ulna with Ring External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSK3DZ	Reposition Right Ulna with Hybrid External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSK3ZZ	Reposition Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPSK44Z	Reposition Right Ulna with Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSK45Z	Reposition Right Ulna with External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSK46Z	Reposition Right Ulna with Intramedullary Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSK4BZ	Reposition Right Ulna with Monoplanar External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSK4CZ	Reposition Right Ulna with Ring External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSK4DZ	Reposition Right Ulna with Hybrid External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSK4ZZ	Reposition Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSKXZZ	Reposition Right Ulna, External Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
OPSL04Z	Reposition Left Ulna with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSL05Z	Reposition Left Ulna with External Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSL06Z	Reposition Left Ulna with Intramedullary Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSL0BZ	Reposition Left Ulna with Monoplanar External Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSL0CZ	Reposition Left Ulna with Ring External Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSL0DZ	Reposition Left Ulna with Hybrid External Fixation Device, Open Approach	ICD-10-PCS	Procedure
OPSL0ZZ	Reposition Left Ulna, Open Approach	ICD-10-PCS	Procedure
OPSL34Z	Reposition Left Ulna with Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSL35Z	Reposition Left Ulna with External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSL36Z	Reposition Left Ulna with Intramedullary Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSL3BZ	Reposition Left Ulna with Monoplanar External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSL3CZ	Reposition Left Ulna with Ring External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSL3DZ	Reposition Left Ulna with Hybrid External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
OPSL3ZZ	Reposition Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
OPSL44Z	Reposition Left Ulna with Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSL45Z	Reposition Left Ulna with External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSL46Z	Reposition Left Ulna with Intramedullary Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSL4BZ	Reposition Left Ulna with Monoplanar External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSL4CZ	Reposition Left Ulna with Ring External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSL4DZ	Reposition Left Ulna with Hybrid External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSL4ZZ	Reposition Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPSLXZZ	Reposition Left Ulna, External Approach	ICD-10-PCS	Procedure
OPU00JZ	Supplement Sternum with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPU03JZ	Supplement Sternum with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPU04JZ	Supplement Sternum with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPU10JZ	Supplement 1 to 2 Ribs with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPU13JZ	Supplement 1 to 2 Ribs with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPU14JZ	Supplement 1 to 2 Ribs with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPU20JZ	Supplement 3 or More Ribs with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPU23JZ	Supplement 3 or More Ribs with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPU24JZ	Supplement 3 or More Ribs with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPU50JZ	Supplement Right Scapula with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPU53JZ	Supplement Right Scapula with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPU54JZ	Supplement Right Scapula with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPU60JZ	Supplement Left Scapula with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPU63JZ	Supplement Left Scapula with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPU64JZ	Supplement Left Scapula with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
OPU70JZ	Supplement Right Glenoid Cavity with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPU73JZ	Supplement Right Glenoid Cavity with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPU74JZ	Supplement Right Glenoid Cavity with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPU80JZ	Supplement Left Glenoid Cavity with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPU83JZ	Supplement Left Glenoid Cavity with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPU84JZ	Supplement Left Glenoid Cavity with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPU90JZ	Supplement Right Clavicle with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPU93JZ	Supplement Right Clavicle with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPU94JZ	Supplement Right Clavicle with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPUB0JZ	Supplement Left Clavicle with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPUB3JZ	Supplement Left Clavicle with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPUB4JZ	Supplement Left Clavicle with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPUH0JZ	Supplement Right Radius with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPUH3JZ	Supplement Right Radius with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPUH4JZ	Supplement Right Radius with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPUJ0JZ	Supplement Left Radius with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPUJ3JZ	Supplement Left Radius with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPUJ4JZ	Supplement Left Radius with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPUK0JZ	Supplement Right Ulna with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPUK3JZ	Supplement Right Ulna with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPUK4JZ	Supplement Right Ulna with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
OPUL0JZ	Supplement Left Ulna with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OPUL3JZ	Supplement Left Ulna with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
OPUL4JZ	Supplement Left Ulna with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
QQB60ZZ	Excision of Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
QQB70ZZ	Excision of Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
QQB80ZZ	Excision of Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
QQB90ZZ	Excision of Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
QQBB0ZZ	Excision of Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
QQBC0ZZ	Excision of Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
QQH604Z	Insertion of Internal Fixation Device into Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
QQH605Z	Insertion of External Fixation Device into Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
QQH606Z	Insertion of Intramedullary Internal Fixation Device into Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
QQH60BZ	Insertion of Monoplanar External Fixation Device into Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
QQH60CZ	Insertion of Ring External Fixation Device into Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
QQH60DZ	Insertion of Hybrid External Fixation Device into Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
QQH634Z	Insertion of Internal Fixation Device into Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
QQH635Z	Insertion of External Fixation Device into Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
0QH636Z	Insertion of Intramedullary Internal Fixation Device into Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH63BZ	Insertion of Monoplanar External Fixation Device into Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH63CZ	Insertion of Ring External Fixation Device into Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH63DZ	Insertion of Hybrid External Fixation Device into Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH644Z	Insertion of Internal Fixation Device into Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH645Z	Insertion of External Fixation Device into Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH646Z	Insertion of Intramedullary Internal Fixation Device into Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH64BZ	Insertion of Monoplanar External Fixation Device into Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH64CZ	Insertion of Ring External Fixation Device into Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH64DZ	Insertion of Hybrid External Fixation Device into Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH704Z	Insertion of Internal Fixation Device into Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QH705Z	Insertion of External Fixation Device into Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QH706Z	Insertion of Intramedullary Internal Fixation Device into Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QH70BZ	Insertion of Monoplanar External Fixation Device into Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QH70CZ	Insertion of Ring External Fixation Device into Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QH70DZ	Insertion of Hybrid External Fixation Device into Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QH734Z	Insertion of Internal Fixation Device into Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH735Z	Insertion of External Fixation Device into Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH736Z	Insertion of Intramedullary Internal Fixation Device into Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH73BZ	Insertion of Monoplanar External Fixation Device into Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH73CZ	Insertion of Ring External Fixation Device into Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH73DZ	Insertion of Hybrid External Fixation Device into Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH744Z	Insertion of Internal Fixation Device into Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH745Z	Insertion of External Fixation Device into Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH746Z	Insertion of Intramedullary Internal Fixation Device into Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH74BZ	Insertion of Monoplanar External Fixation Device into Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH74CZ	Insertion of Ring External Fixation Device into Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
0QH74DZ	Insertion of Hybrid External Fixation Device into Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH804Z	Insertion of Internal Fixation Device into Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH805Z	Insertion of External Fixation Device into Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH806Z	Insertion of Intramedullary Internal Fixation Device into Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH80BZ	Insertion of Monoplanar External Fixation Device into Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH80CZ	Insertion of Ring External Fixation Device into Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH80DZ	Insertion of Hybrid External Fixation Device into Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH834Z	Insertion of Internal Fixation Device into Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH835Z	Insertion of External Fixation Device into Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH836Z	Insertion of Intramedullary Internal Fixation Device into Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH83BZ	Insertion of Monoplanar External Fixation Device into Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH83CZ	Insertion of Ring External Fixation Device into Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH83DZ	Insertion of Hybrid External Fixation Device into Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH844Z	Insertion of Internal Fixation Device into Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH845Z	Insertion of External Fixation Device into Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH846Z	Insertion of Intramedullary Internal Fixation Device into Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH84BZ	Insertion of Monoplanar External Fixation Device into Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH84CZ	Insertion of Ring External Fixation Device into Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH84DZ	Insertion of Hybrid External Fixation Device into Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH904Z	Insertion of Internal Fixation Device into Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH905Z	Insertion of External Fixation Device into Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH906Z	Insertion of Intramedullary Internal Fixation Device into Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH90BZ	Insertion of Monoplanar External Fixation Device into Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH90CZ	Insertion of Ring External Fixation Device into Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH90DZ	Insertion of Hybrid External Fixation Device into Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH934Z	Insertion of Internal Fixation Device into Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH935Z	Insertion of External Fixation Device into Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH936Z	Insertion of Intramedullary Internal Fixation Device into Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
0QH93BZ	Insertion of Monoplanar External Fixation Device into Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH93CZ	Insertion of Ring External Fixation Device into Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH93DZ	Insertion of Hybrid External Fixation Device into Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH944Z	Insertion of Internal Fixation Device into Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH945Z	Insertion of External Fixation Device into Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH946Z	Insertion of Intramedullary Internal Fixation Device into Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH94BZ	Insertion of Monoplanar External Fixation Device into Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH94CZ	Insertion of Ring External Fixation Device into Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH94DZ	Insertion of Hybrid External Fixation Device into Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHB04Z	Insertion of Internal Fixation Device into Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHB05Z	Insertion of External Fixation Device into Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHB06Z	Insertion of Intramedullary Internal Fixation Device into Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHB0BZ	Insertion of Monoplanar External Fixation Device into Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHB0CZ	Insertion of Ring External Fixation Device into Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHB0DZ	Insertion of Hybrid External Fixation Device into Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHB34Z	Insertion of Internal Fixation Device into Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHB35Z	Insertion of External Fixation Device into Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHB36Z	Insertion of Intramedullary Internal Fixation Device into Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHB3BZ	Insertion of Monoplanar External Fixation Device into Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHB3CZ	Insertion of Ring External Fixation Device into Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHB3DZ	Insertion of Hybrid External Fixation Device into Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHB44Z	Insertion of Internal Fixation Device into Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHB45Z	Insertion of External Fixation Device into Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHB46Z	Insertion of Intramedullary Internal Fixation Device into Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHB4BZ	Insertion of Monoplanar External Fixation Device into Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHB4CZ	Insertion of Ring External Fixation Device into Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHB4DZ	Insertion of Hybrid External Fixation Device into Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
0QHC04Z	Insertion of Internal Fixation Device into Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHC05Z	Insertion of External Fixation Device into Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHC06Z	Insertion of Intramedullary Internal Fixation Device into Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHC0BZ	Insertion of Monoplanar External Fixation Device into Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHC0CZ	Insertion of Ring External Fixation Device into Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHC0DZ	Insertion of Hybrid External Fixation Device into Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHC34Z	Insertion of Internal Fixation Device into Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHC35Z	Insertion of External Fixation Device into Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHC36Z	Insertion of Intramedullary Internal Fixation Device into Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHC3BZ	Insertion of Monoplanar External Fixation Device into Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHC3CZ	Insertion of Ring External Fixation Device into Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHC3DZ	Insertion of Hybrid External Fixation Device into Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHC44Z	Insertion of Internal Fixation Device into Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHC45Z	Insertion of External Fixation Device into Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHC46Z	Insertion of Intramedullary Internal Fixation Device into Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHC4BZ	Insertion of Monoplanar External Fixation Device into Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHC4CZ	Insertion of Ring External Fixation Device into Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHC4DZ	Insertion of Hybrid External Fixation Device into Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QN60ZZ	Release Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QN63ZZ	Release Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QN64ZZ	Release Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QN70ZZ	Release Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QN73ZZ	Release Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QN74ZZ	Release Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QN80ZZ	Release Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QN83ZZ	Release Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QN84ZZ	Release Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QN90ZZ	Release Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QN93ZZ	Release Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QN94ZZ	Release Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QNB0ZZ	Release Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QNB3ZZ	Release Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QNB4ZZ	Release Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QNC0ZZ	Release Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QNC3ZZ	Release Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
0QNC4ZZ	Release Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP604Z	Removal of Internal Fixation Device from Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QP605Z	Removal of External Fixation Device from Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QP607Z	Removal of Autologous Tissue Substitute from Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QP60JZ	Removal of Synthetic Substitute from Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QP60KZ	Removal of Nonautologous Tissue Substitute from Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QP634Z	Removal of Internal Fixation Device from Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QP635Z	Removal of External Fixation Device from Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QP637Z	Removal of Autologous Tissue Substitute from Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QP63JZ	Removal of Synthetic Substitute from Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QP63KZ	Removal of Nonautologous Tissue Substitute from Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QP644Z	Removal of Internal Fixation Device from Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP645Z	Removal of External Fixation Device from Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP647Z	Removal of Autologous Tissue Substitute from Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP64JZ	Removal of Synthetic Substitute from Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP64KZ	Removal of Nonautologous Tissue Substitute from Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP704Z	Removal of Internal Fixation Device from Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QP705Z	Removal of External Fixation Device from Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QP707Z	Removal of Autologous Tissue Substitute from Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QP70JZ	Removal of Synthetic Substitute from Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QP70KZ	Removal of Nonautologous Tissue Substitute from Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QP734Z	Removal of Internal Fixation Device from Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QP735Z	Removal of External Fixation Device from Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QP737Z	Removal of Autologous Tissue Substitute from Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QP73JZ	Removal of Synthetic Substitute from Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QP73KZ	Removal of Nonautologous Tissue Substitute from Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QP744Z	Removal of Internal Fixation Device from Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP745Z	Removal of External Fixation Device from Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP747Z	Removal of Autologous Tissue Substitute from Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP74JZ	Removal of Synthetic Substitute from Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP74KZ	Removal of Nonautologous Tissue Substitute from Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP804Z	Removal of Internal Fixation Device from Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QP805Z	Removal of External Fixation Device from Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QP807Z	Removal of Autologous Tissue Substitute from Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
0QP80JZ	Removal of Synthetic Substitute from Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QP80KZ	Removal of Nonautologous Tissue Substitute from Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QP834Z	Removal of Internal Fixation Device from Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QP835Z	Removal of External Fixation Device from Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QP837Z	Removal of Autologous Tissue Substitute from Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QP83JZ	Removal of Synthetic Substitute from Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QP83KZ	Removal of Nonautologous Tissue Substitute from Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QP844Z	Removal of Internal Fixation Device from Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP845Z	Removal of External Fixation Device from Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP847Z	Removal of Autologous Tissue Substitute from Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP84JZ	Removal of Synthetic Substitute from Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP84KZ	Removal of Nonautologous Tissue Substitute from Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP904Z	Removal of Internal Fixation Device from Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QP905Z	Removal of External Fixation Device from Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QP907Z	Removal of Autologous Tissue Substitute from Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QP90JZ	Removal of Synthetic Substitute from Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QP90KZ	Removal of Nonautologous Tissue Substitute from Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QP934Z	Removal of Internal Fixation Device from Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QP935Z	Removal of External Fixation Device from Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QP937Z	Removal of Autologous Tissue Substitute from Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QP93JZ	Removal of Synthetic Substitute from Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QP93KZ	Removal of Nonautologous Tissue Substitute from Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QP944Z	Removal of Internal Fixation Device from Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP945Z	Removal of External Fixation Device from Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP947Z	Removal of Autologous Tissue Substitute from Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP94JZ	Removal of Synthetic Substitute from Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP94KZ	Removal of Nonautologous Tissue Substitute from Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QPB04Z	Removal of Internal Fixation Device from Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QPB05Z	Removal of External Fixation Device from Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QPB07Z	Removal of Autologous Tissue Substitute from Right Lower Femur, Open Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0QPBOJZ	Removal of Synthetic Substitute from Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QPB0KZ	Removal of Nonautologous Tissue Substitute from Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QPB34Z	Removal of Internal Fixation Device from Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QPB35Z	Removal of External Fixation Device from Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QPB37Z	Removal of Autologous Tissue Substitute from Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QPB3JZ	Removal of Synthetic Substitute from Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QPB3KZ	Removal of Nonautologous Tissue Substitute from Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QPB44Z	Removal of Internal Fixation Device from Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QPB45Z	Removal of External Fixation Device from Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QPB47Z	Removal of Autologous Tissue Substitute from Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QPB4JZ	Removal of Synthetic Substitute from Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QPB4KZ	Removal of Nonautologous Tissue Substitute from Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QPC04Z	Removal of Internal Fixation Device from Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QPC05Z	Removal of External Fixation Device from Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QPC07Z	Removal of Autologous Tissue Substitute from Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QPC0JZ	Removal of Synthetic Substitute from Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QPC0KZ	Removal of Nonautologous Tissue Substitute from Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QPC34Z	Removal of Internal Fixation Device from Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QPC35Z	Removal of External Fixation Device from Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QPC37Z	Removal of Autologous Tissue Substitute from Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QPC3JZ	Removal of Synthetic Substitute from Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QPC3KZ	Removal of Nonautologous Tissue Substitute from Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QPC44Z	Removal of Internal Fixation Device from Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QPC45Z	Removal of External Fixation Device from Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QPC47Z	Removal of Autologous Tissue Substitute from Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QPC4JZ	Removal of Synthetic Substitute from Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QPC4KZ	Removal of Nonautologous Tissue Substitute from Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QQ60ZZ	Repair Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QQ63ZZ	Repair Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QQ64ZZ	Repair Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QQ6XZZ	Repair Right Upper Femur, External Approach	ICD-10-PCS	Procedure
0QQ70ZZ	Repair Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QQ73ZZ	Repair Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
0QQ74ZZ	Repair Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QQ7XZZ	Repair Left Upper Femur, External Approach	ICD-10-PCS	Procedure
0QQ80ZZ	Repair Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QQ83ZZ	Repair Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QQ84ZZ	Repair Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QQ8XZZ	Repair Right Femoral Shaft, External Approach	ICD-10-PCS	Procedure
0QQ90ZZ	Repair Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QQ93ZZ	Repair Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QQ94ZZ	Repair Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QQ9XZZ	Repair Left Femoral Shaft, External Approach	ICD-10-PCS	Procedure
0QQB0ZZ	Repair Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QQB3ZZ	Repair Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QQB4ZZ	Repair Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QQBXZZ	Repair Right Lower Femur, External Approach	ICD-10-PCS	Procedure
0QQC0ZZ	Repair Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QQC3ZZ	Repair Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QQC4ZZ	Repair Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QQCXZZ	Repair Left Lower Femur, External Approach	ICD-10-PCS	Procedure
0QR60JZ	Replacement of Right Upper Femur with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QR63JZ	Replacement of Right Upper Femur with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QR64JZ	Replacement of Right Upper Femur with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QR70JZ	Replacement of Left Upper Femur with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QR73JZ	Replacement of Left Upper Femur with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QR74JZ	Replacement of Left Upper Femur with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QR80JZ	Replacement of Right Femoral Shaft with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QR83JZ	Replacement of Right Femoral Shaft with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QR84JZ	Replacement of Right Femoral Shaft with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QR90JZ	Replacement of Left Femoral Shaft with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QR93JZ	Replacement of Left Femoral Shaft with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QR94JZ	Replacement of Left Femoral Shaft with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QRB0JZ	Replacement of Right Lower Femur with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QRB3JZ	Replacement of Right Lower Femur with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QRB4JZ	Replacement of Right Lower Femur with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QRC0JZ	Replacement of Left Lower Femur with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QRC3JZ	Replacement of Left Lower Femur with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QRC4JZ	Replacement of Left Lower Femur with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS604Z	Reposition Right Upper Femur with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS605Z	Reposition Right Upper Femur with External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS606Z	Reposition Right Upper Femur with Intramedullary Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS60BZ	Reposition Right Upper Femur with Monoplanar External Fixation Device, Open Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
0QS60CZ	Reposition Right Upper Femur with Ring External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS60DZ	Reposition Right Upper Femur with Hybrid External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS60ZZ	Reposition Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QS634Z	Reposition Right Upper Femur with Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS635Z	Reposition Right Upper Femur with External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS636Z	Reposition Right Upper Femur with Intramedullary Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS63BZ	Reposition Right Upper Femur with Monoplanar External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS63CZ	Reposition Right Upper Femur with Ring External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS63DZ	Reposition Right Upper Femur with Hybrid External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS63ZZ	Reposition Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QS644Z	Reposition Right Upper Femur with Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS645Z	Reposition Right Upper Femur with External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS646Z	Reposition Right Upper Femur with Intramedullary Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS64BZ	Reposition Right Upper Femur with Monoplanar External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS64CZ	Reposition Right Upper Femur with Ring External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS64DZ	Reposition Right Upper Femur with Hybrid External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS64ZZ	Reposition Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS6XZZ	Reposition Right Upper Femur, External Approach	ICD-10-PCS	Procedure
0QS704Z	Reposition Left Upper Femur with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS705Z	Reposition Left Upper Femur with External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS706Z	Reposition Left Upper Femur with Intramedullary Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS70BZ	Reposition Left Upper Femur with Monoplanar External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS70CZ	Reposition Left Upper Femur with Ring External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS70DZ	Reposition Left Upper Femur with Hybrid External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS70ZZ	Reposition Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QS734Z	Reposition Left Upper Femur with Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS735Z	Reposition Left Upper Femur with External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS736Z	Reposition Left Upper Femur with Intramedullary Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS73BZ	Reposition Left Upper Femur with Monoplanar External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS73CZ	Reposition Left Upper Femur with Ring External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS73DZ	Reposition Left Upper Femur with Hybrid External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS73ZZ	Reposition Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
0QS744Z	Reposition Left Upper Femur with Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS745Z	Reposition Left Upper Femur with External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS746Z	Reposition Left Upper Femur with Intramedullary Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS74BZ	Reposition Left Upper Femur with Monoplanar External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS74CZ	Reposition Left Upper Femur with Ring External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS74DZ	Reposition Left Upper Femur with Hybrid External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS74ZZ	Reposition Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS7XZZ	Reposition Left Upper Femur, External Approach	ICD-10-PCS	Procedure
0QS804Z	Reposition Right Femoral Shaft with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS805Z	Reposition Right Femoral Shaft with External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS806Z	Reposition Right Femoral Shaft with Intramedullary Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS80BZ	Reposition Right Femoral Shaft with Monoplanar External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS80CZ	Reposition Right Femoral Shaft with Ring External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS80DZ	Reposition Right Femoral Shaft with Hybrid External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS80ZZ	Reposition Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QS834Z	Reposition Right Femoral Shaft with Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS835Z	Reposition Right Femoral Shaft with External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS836Z	Reposition Right Femoral Shaft with Intramedullary Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS83BZ	Reposition Right Femoral Shaft with Monoplanar External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS83CZ	Reposition Right Femoral Shaft with Ring External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS83DZ	Reposition Right Femoral Shaft with Hybrid External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS83ZZ	Reposition Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QS844Z	Reposition Right Femoral Shaft with Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS845Z	Reposition Right Femoral Shaft with External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS846Z	Reposition Right Femoral Shaft with Intramedullary Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS84BZ	Reposition Right Femoral Shaft with Monoplanar External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS84CZ	Reposition Right Femoral Shaft with Ring External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS84DZ	Reposition Right Femoral Shaft with Hybrid External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS84ZZ	Reposition Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS8XZZ	Reposition Right Femoral Shaft, External Approach	ICD-10-PCS	Procedure
0QS904Z	Reposition Left Femoral Shaft with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
0QS905Z	Reposition Left Femoral Shaft with External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS906Z	Reposition Left Femoral Shaft with Intramedullary Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS90BZ	Reposition Left Femoral Shaft with Monoplanar External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS90CZ	Reposition Left Femoral Shaft with Ring External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS90DZ	Reposition Left Femoral Shaft with Hybrid External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS90ZZ	Reposition Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QS934Z	Reposition Left Femoral Shaft with Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS935Z	Reposition Left Femoral Shaft with External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS936Z	Reposition Left Femoral Shaft with Intramedullary Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS93BZ	Reposition Left Femoral Shaft with Monoplanar External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS93CZ	Reposition Left Femoral Shaft with Ring External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS93DZ	Reposition Left Femoral Shaft with Hybrid External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS93ZZ	Reposition Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QS944Z	Reposition Left Femoral Shaft with Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS945Z	Reposition Left Femoral Shaft with External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS946Z	Reposition Left Femoral Shaft with Intramedullary Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS94BZ	Reposition Left Femoral Shaft with Monoplanar External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS94CZ	Reposition Left Femoral Shaft with Ring External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS94DZ	Reposition Left Femoral Shaft with Hybrid External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS94ZZ	Reposition Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS9XZZ	Reposition Left Femoral Shaft, External Approach	ICD-10-PCS	Procedure
0QSB04Z	Reposition Right Lower Femur with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSB05Z	Reposition Right Lower Femur with External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSB06Z	Reposition Right Lower Femur with Intramedullary Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSB0BZ	Reposition Right Lower Femur with Monoplanar External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSB0CZ	Reposition Right Lower Femur with Ring External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSB0DZ	Reposition Right Lower Femur with Hybrid External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSB0ZZ	Reposition Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QSB34Z	Reposition Right Lower Femur with Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSB35Z	Reposition Right Lower Femur with External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSB36Z	Reposition Right Lower Femur with Intramedullary Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSB3BZ	Reposition Right Lower Femur with Monoplanar External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
0QSB3CZ	Reposition Right Lower Femur with Ring External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSB3DZ	Reposition Right Lower Femur with Hybrid External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSB3ZZ	Reposition Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QSB44Z	Reposition Right Lower Femur with Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSB45Z	Reposition Right Lower Femur with External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSB46Z	Reposition Right Lower Femur with Intramedullary Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSB4BZ	Reposition Right Lower Femur with Monoplanar External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSB4CZ	Reposition Right Lower Femur with Ring External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSB4DZ	Reposition Right Lower Femur with Hybrid External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSB4ZZ	Reposition Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSBXZZ	Reposition Right Lower Femur, External Approach	ICD-10-PCS	Procedure
0QSC04Z	Reposition Left Lower Femur with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSC05Z	Reposition Left Lower Femur with External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSC06Z	Reposition Left Lower Femur with Intramedullary Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSC0BZ	Reposition Left Lower Femur with Monoplanar External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSC0CZ	Reposition Left Lower Femur with Ring External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSC0DZ	Reposition Left Lower Femur with Hybrid External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSC0ZZ	Reposition Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QSC34Z	Reposition Left Lower Femur with Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSC35Z	Reposition Left Lower Femur with External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSC36Z	Reposition Left Lower Femur with Intramedullary Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSC3BZ	Reposition Left Lower Femur with Monoplanar External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSC3CZ	Reposition Left Lower Femur with Ring External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSC3DZ	Reposition Left Lower Femur with Hybrid External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSC3ZZ	Reposition Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QSC44Z	Reposition Left Lower Femur with Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSC45Z	Reposition Left Lower Femur with External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSC46Z	Reposition Left Lower Femur with Intramedullary Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSC4BZ	Reposition Left Lower Femur with Monoplanar External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSC4CZ	Reposition Left Lower Femur with Ring External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0QSC4DZ	Reposition Left Lower Femur with Hybrid External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSC4ZZ	Reposition Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSCXZZ	Reposition Left Lower Femur, External Approach	ICD-10-PCS	Procedure
0QU60JZ	Supplement Right Upper Femur with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QU63JZ	Supplement Right Upper Femur with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QU64JZ	Supplement Right Upper Femur with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QU70JZ	Supplement Left Upper Femur with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QU73JZ	Supplement Left Upper Femur with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QU74JZ	Supplement Left Upper Femur with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QU80JZ	Supplement Right Femoral Shaft with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QU83JZ	Supplement Right Femoral Shaft with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QU84JZ	Supplement Right Femoral Shaft with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QU90JZ	Supplement Left Femoral Shaft with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QU93JZ	Supplement Left Femoral Shaft with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QU94JZ	Supplement Left Femoral Shaft with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QUB0JZ	Supplement Right Lower Femur with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QUB3JZ	Supplement Right Lower Femur with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QUB4JZ	Supplement Right Lower Femur with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QUC0JZ	Supplement Left Lower Femur with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QUC3JZ	Supplement Left Lower Femur with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QUC4JZ	Supplement Left Lower Femur with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0XH23YZ	Insertion of Other Device into Right Shoulder Region, Percutaneous Approach	ICD-10-PCS	Procedure
0XH33YZ	Insertion of Other Device into Left Shoulder Region, Percutaneous Approach	ICD-10-PCS	Procedure
R55	Syncope and collapse	ICD-10-CM	Diagnosis
Peptic Ulcer Disease			
531.0	Acute gastric ulcer with hemorrhage	ICD-9-CM	Diagnosis
531.00	Acute gastric ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
531.01	Acute gastric ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
531.1	Acute gastric ulcer with perforation	ICD-9-CM	Diagnosis
531.10	Acute gastric ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.11	Acute gastric ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
531.2	Acute gastric ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
531.20	Acute gastric ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.21	Acute gastric ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
531.3	Acute gastric ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
531.30	Acute gastric ulcer without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
531.31	Acute gastric ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
531.4	Chronic or unspecified gastric ulcer with hemorrhage	ICD-9-CM	Diagnosis
531.40	Chronic or unspecified gastric ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
531.41	Chronic or unspecified gastric ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
531.5	Chronic or unspecified gastric ulcer with perforation	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
531.50	Chronic or unspecified gastric ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.51	Chronic or unspecified gastric ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
531.6	Chronic or unspecified gastric ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
531.60	Chronic or unspecified gastric ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.61	Chronic or unspecified gastric ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
531.7	Chronic gastric ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
531.70	Chronic gastric ulcer without mention of hemorrhage, perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.71	Chronic gastric ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
532.0	Acute duodenal ulcer with hemorrhage	ICD-9-CM	Diagnosis
532.00	Acute duodenal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
532.01	Acute duodenal ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
532.1	Acute duodenal ulcer with perforation	ICD-9-CM	Diagnosis
532.10	Acute duodenal ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
532.11	Acute duodenal ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
532.2	Acute duodenal ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
532.20	Acute duodenal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
532.21	Acute duodenal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
532.3	Acute duodenal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
532.30	Acute duodenal ulcer without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
532.31	Acute duodenal ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
532.4	Chronic or unspecified duodenal ulcer with hemorrhage	ICD-9-CM	Diagnosis
532.40	Duodenal ulcer, chronic or unspecified, with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
532.41	Chronic or unspecified duodenal ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
532.5	Chronic or unspecified duodenal ulcer with perforation	ICD-9-CM	Diagnosis
532.50	Chronic or unspecified duodenal ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
532.51	Chronic or unspecified duodenal ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
532.6	Chronic or unspecified duodenal ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
532.60	Chronic or unspecified duodenal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
532.61	Chronic or unspecified duodenal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
532.7	Chronic duodenal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
532.70	Chronic duodenal ulcer without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
532.71	Chronic duodenal ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
533.0	Acute peptic ulcer, unspecified site, with hemorrhage	ICD-9-CM	Diagnosis
533.00	Acute peptic ulcer, unspecified site, with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
533.01	Acute peptic ulcer, unspecified site, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
533.1	Acute peptic ulcer, unspecified site, with perforation	ICD-9-CM	Diagnosis
533.10	Acute peptic ulcer, unspecified site, with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
533.11	Acute peptic ulcer, unspecified site, with perforation and obstruction	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
533.2	Acute peptic ulcer, unspecified site, with hemorrhage and perforation	ICD-9-CM	Diagnosis
533.20	Acute peptic ulcer, unspecified site, with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
533.21	Acute peptic ulcer, unspecified site, with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
533.3	Acute peptic ulcer, unspecified site, without mention of hemorrhage and perforation	ICD-9-CM	Diagnosis
533.30	Acute peptic ulcer, unspecified site, without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
533.31	Acute peptic ulcer, unspecified site, without mention of hemorrhage and perforation, with obstruction	ICD-9-CM	Diagnosis
533.4	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage	ICD-9-CM	Diagnosis
533.40	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
533.41	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
533.5	Chronic or unspecified peptic ulcer, unspecified site, with perforation	ICD-9-CM	Diagnosis
533.50	Chronic or unspecified peptic ulcer, unspecified site, with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
533.51	Chronic or unspecified peptic ulcer, unspecified site, with perforation and obstruction	ICD-9-CM	Diagnosis
533.6	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage and perforation	ICD-9-CM	Diagnosis
533.60	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
533.61	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
533.7	Chronic peptic ulcer, unspecified site, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
533.70	Chronic peptic ulcer, unspecified site, without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
533.71	Chronic peptic ulcer of unspecified site without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
534.0	Acute gastrojejunal ulcer with hemorrhage	ICD-9-CM	Diagnosis
534.00	Acute gastrojejunal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
534.01	Acute gastrojejunal ulcer, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
534.1	Acute gastrojejunal ulcer with perforation	ICD-9-CM	Diagnosis
534.10	Acute gastrojejunal ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
534.11	Acute gastrojejunal ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
534.2	Acute gastrojejunal ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
534.20	Acute gastrojejunal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
534.21	Acute gastrojejunal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
534.3	Acute gastrojejunal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
534.30	Acute gastrojejunal ulcer without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
534.31	Acute gastrojejunal ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
534.4	Chronic or unspecified gastrojejunal ulcer with hemorrhage	ICD-9-CM	Diagnosis
534.40	Chronic or unspecified gastrojejunal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
534.41	Chronic or unspecified gastrojejunal ulcer, with hemorrhage and obstruction	ICD-9-CM	Diagnosis

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Code	Description	Code Type	Code Category
534.5	Chronic or unspecified gastrojejunal ulcer with perforation	ICD-9-CM	Diagnosis
534.50	Chronic or unspecified gastrojejunal ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
534.51	Chronic or unspecified gastrojejunal ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
534.6	Chronic or unspecified gastrojejunal ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
534.60	Chronic or unspecified gastrojejunal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
534.61	Chronic or unspecified gastrojejunal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
534.7	Chronic gastrojejunal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
534.70	Chronic gastrojejunal ulcer without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
534.71	Chronic gastrojejunal ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
44.4	Control of hemorrhage and suture of ulcer of stomach or duodenum	ICD-9-CM	Procedure
44.40	Suture of peptic ulcer, not otherwise specified	ICD-9-CM	Procedure
44.41	Suture of gastric ulcer site	ICD-9-CM	Procedure
44.42	Suture of duodenal ulcer site	ICD-9-CM	Procedure
K25.0	Acute gastric ulcer with hemorrhage	ICD-10-CM	Diagnosis
K25.1	Acute gastric ulcer with perforation	ICD-10-CM	Diagnosis
K25.2	Acute gastric ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K25.3	Acute gastric ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K25.4	Chronic or unspecified gastric ulcer with hemorrhage	ICD-10-CM	Diagnosis
K25.5	Chronic or unspecified gastric ulcer with perforation	ICD-10-CM	Diagnosis
K25.6	Chronic or unspecified gastric ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K25.7	Chronic gastric ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K26.0	Acute duodenal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K26.1	Acute duodenal ulcer with perforation	ICD-10-CM	Diagnosis
K26.2	Acute duodenal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K26.3	Acute duodenal ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K26.4	Chronic or unspecified duodenal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K26.5	Chronic or unspecified duodenal ulcer with perforation	ICD-10-CM	Diagnosis
K26.6	Chronic or unspecified duodenal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K26.7	Chronic duodenal ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K27.0	Acute peptic ulcer, site unspecified, with hemorrhage	ICD-10-CM	Diagnosis
K27.1	Acute peptic ulcer, site unspecified, with perforation	ICD-10-CM	Diagnosis
K27.2	Acute peptic ulcer, site unspecified, with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K27.3	Acute peptic ulcer, site unspecified, without hemorrhage or perforation	ICD-10-CM	Diagnosis
K27.4	Chronic or unspecified peptic ulcer, site unspecified, with hemorrhage	ICD-10-CM	Diagnosis
K27.5	Chronic or unspecified peptic ulcer, site unspecified, with perforation	ICD-10-CM	Diagnosis
K27.6	Chronic or unspecified peptic ulcer, site unspecified, with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K27.7	Chronic peptic ulcer, site unspecified, without hemorrhage or perforation	ICD-10-CM	Diagnosis
K28.0	Acute gastrojejunal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K28.1	Acute gastrojejunal ulcer with perforation	ICD-10-CM	Diagnosis
K28.2	Acute gastrojejunal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K28.3	Acute gastrojejunal ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K28.4	Chronic or unspecified gastrojejunal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K28.5	Chronic or unspecified gastrojejunal ulcer with perforation	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
K28.6	Chronic or unspecified gastrojejunal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K28.7	Chronic gastrojejunal ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K56.699	Other intestinal obstruction unspecified as to partial versus complete obstruction	ICD-10-CM	Diagnosis
0DQ60ZZ	Repair Stomach, Open Approach	ICD-10-PCS	Procedure
0DQ63ZZ	Repair Stomach, Percutaneous Approach	ICD-10-PCS	Procedure
0DQ64ZZ	Repair Stomach, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0DQ67ZZ	Repair Stomach, Via Natural or Artificial Opening	ICD-10-PCS	Procedure
0DQ68ZZ	Repair Stomach, Via Natural or Artificial Opening Endoscopic	ICD-10-PCS	Procedure
0DQ90ZZ	Repair Duodenum, Open Approach	ICD-10-PCS	Procedure
0DQ93ZZ	Repair Duodenum, Percutaneous Approach	ICD-10-PCS	Procedure
0DQ94ZZ	Repair Duodenum, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0DQ97ZZ	Repair Duodenum, Via Natural or Artificial Opening	ICD-10-PCS	Procedure
0DQ98ZZ	Repair Duodenum, Via Natural or Artificial Opening Endoscopic	ICD-10-PCS	Procedure
Stroke			
430	Subarachnoid hemorrhage	ICD-9-CM	Diagnosis
431	Intracerebral hemorrhage	ICD-9-CM	Diagnosis
433.01	Occlusion and stenosis of basilar artery with cerebral infarction	ICD-9-CM	Diagnosis
433.11	Occlusion and stenosis of carotid artery with cerebral infarction	ICD-9-CM	Diagnosis
433.21	Occlusion and stenosis of vertebral artery with cerebral infarction	ICD-9-CM	Diagnosis
433.31	Occlusion and stenosis of multiple and bilateral precerebral arteries with cerebral infarction	ICD-9-CM	Diagnosis
433.81	Occlusion and stenosis of other specified precerebral artery with cerebral infarction	ICD-9-CM	Diagnosis
433.91	Occlusion and stenosis of unspecified precerebral artery with cerebral infarction	ICD-9-CM	Diagnosis
434.01	Cerebral thrombosis with cerebral infarction	ICD-9-CM	Diagnosis
434.11	Cerebral embolism with cerebral infarction	ICD-9-CM	Diagnosis
434.91	Unspecified cerebral artery occlusion with cerebral infarction	ICD-9-CM	Diagnosis
436	Acute, but ill-defined, cerebrovascular disease	ICD-9-CM	Diagnosis
I60.00	Nontraumatic subarachnoid hemorrhage from unspecified carotid siphon and bifurcation	ICD-10-CM	Diagnosis
I60.01	Nontraumatic subarachnoid hemorrhage from right carotid siphon and bifurcation	ICD-10-CM	Diagnosis
I60.02	Nontraumatic subarachnoid hemorrhage from left carotid siphon and bifurcation	ICD-10-CM	Diagnosis
I60.10	Nontraumatic subarachnoid hemorrhage from unspecified middle cerebral artery	ICD-10-CM	Diagnosis
I60.11	Nontraumatic subarachnoid hemorrhage from right middle cerebral artery	ICD-10-CM	Diagnosis
I60.12	Nontraumatic subarachnoid hemorrhage from left middle cerebral artery	ICD-10-CM	Diagnosis
I60.2	Nontraumatic subarachnoid hemorrhage from anterior communicating artery	ICD-10-CM	Diagnosis
I60.30	Nontraumatic subarachnoid hemorrhage from unspecified posterior communicating artery	ICD-10-CM	Diagnosis
I60.31	Nontraumatic subarachnoid hemorrhage from right posterior communicating artery	ICD-10-CM	Diagnosis
I60.32	Nontraumatic subarachnoid hemorrhage from left posterior communicating artery	ICD-10-CM	Diagnosis
I60.4	Nontraumatic subarachnoid hemorrhage from basilar artery	ICD-10-CM	Diagnosis
I60.50	Nontraumatic subarachnoid hemorrhage from unspecified vertebral artery	ICD-10-CM	Diagnosis
I60.51	Nontraumatic subarachnoid hemorrhage from right vertebral artery	ICD-10-CM	Diagnosis
I60.52	Nontraumatic subarachnoid hemorrhage from left vertebral artery	ICD-10-CM	Diagnosis
I60.6	Nontraumatic subarachnoid hemorrhage from other intracranial arteries	ICD-10-CM	Diagnosis
I60.7	Nontraumatic subarachnoid hemorrhage from unspecified intracranial artery	ICD-10-CM	Diagnosis
I60.8	Other nontraumatic subarachnoid hemorrhage	ICD-10-CM	Diagnosis
I60.9	Nontraumatic subarachnoid hemorrhage, unspecified	ICD-10-CM	Diagnosis
I61.0	Nontraumatic intracerebral hemorrhage in hemisphere, subcortical	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
I61.1	Nontraumatic intracerebral hemorrhage in hemisphere, cortical	ICD-10-CM	Diagnosis
I61.2	Nontraumatic intracerebral hemorrhage in hemisphere, unspecified	ICD-10-CM	Diagnosis
I61.3	Nontraumatic intracerebral hemorrhage in brain stem	ICD-10-CM	Diagnosis
I61.4	Nontraumatic intracerebral hemorrhage in cerebellum	ICD-10-CM	Diagnosis
I61.5	Nontraumatic intracerebral hemorrhage, intraventricular	ICD-10-CM	Diagnosis
I61.6	Nontraumatic intracerebral hemorrhage, multiple localized	ICD-10-CM	Diagnosis
I61.8	Other nontraumatic intracerebral hemorrhage	ICD-10-CM	Diagnosis
I61.9	Nontraumatic intracerebral hemorrhage, unspecified	ICD-10-CM	Diagnosis
I63.00	Cerebral infarction due to thrombosis of unspecified precerebral artery	ICD-10-CM	Diagnosis
I63.011	Cerebral infarction due to thrombosis of right vertebral artery	ICD-10-CM	Diagnosis
I63.012	Cerebral infarction due to thrombosis of left vertebral artery	ICD-10-CM	Diagnosis
I63.013	Cerebral infarction due to thrombosis of bilateral vertebral arteries	ICD-10-CM	Diagnosis
I63.019	Cerebral infarction due to thrombosis of unspecified vertebral artery	ICD-10-CM	Diagnosis
I63.02	Cerebral infarction due to thrombosis of basilar artery	ICD-10-CM	Diagnosis
I63.031	Cerebral infarction due to thrombosis of right carotid artery	ICD-10-CM	Diagnosis
I63.032	Cerebral infarction due to thrombosis of left carotid artery	ICD-10-CM	Diagnosis
I63.033	Cerebral infarction due to thrombosis of bilateral carotid arteries	ICD-10-CM	Diagnosis
I63.039	Cerebral infarction due to thrombosis of unspecified carotid artery	ICD-10-CM	Diagnosis
I63.09	Cerebral infarction due to thrombosis of other precerebral artery	ICD-10-CM	Diagnosis
I63.10	Cerebral infarction due to embolism of unspecified precerebral artery	ICD-10-CM	Diagnosis
I63.111	Cerebral infarction due to embolism of right vertebral artery	ICD-10-CM	Diagnosis
I63.112	Cerebral infarction due to embolism of left vertebral artery	ICD-10-CM	Diagnosis
I63.113	Cerebral infarction due to embolism of bilateral vertebral arteries	ICD-10-CM	Diagnosis
I63.119	Cerebral infarction due to embolism of unspecified vertebral artery	ICD-10-CM	Diagnosis
I63.12	Cerebral infarction due to embolism of basilar artery	ICD-10-CM	Diagnosis
I63.131	Cerebral infarction due to embolism of right carotid artery	ICD-10-CM	Diagnosis
I63.132	Cerebral infarction due to embolism of left carotid artery	ICD-10-CM	Diagnosis
I63.133	Cerebral infarction due to embolism of bilateral carotid arteries	ICD-10-CM	Diagnosis
I63.139	Cerebral infarction due to embolism of unspecified carotid artery	ICD-10-CM	Diagnosis
I63.19	Cerebral infarction due to embolism of other precerebral artery	ICD-10-CM	Diagnosis
I63.20	Cerebral infarction due to unspecified occlusion or stenosis of unspecified precerebral arteries	ICD-10-CM	Diagnosis
I63.211	Cerebral infarction due to unspecified occlusion or stenosis of right vertebral artery	ICD-10-CM	Diagnosis
I63.212	Cerebral infarction due to unspecified occlusion or stenosis of left vertebral artery	ICD-10-CM	Diagnosis
I63.213	Cerebral infarction due to unspecified occlusion or stenosis of bilateral vertebral arteries	ICD-10-CM	Diagnosis
I63.219	Cerebral infarction due to unspecified occlusion or stenosis of unspecified vertebral artery	ICD-10-CM	Diagnosis
I63.22	Cerebral infarction due to unspecified occlusion or stenosis of basilar artery	ICD-10-CM	Diagnosis
I63.231	Cerebral infarction due to unspecified occlusion or stenosis of right carotid arteries	ICD-10-CM	Diagnosis
I63.232	Cerebral infarction due to unspecified occlusion or stenosis of left carotid arteries	ICD-10-CM	Diagnosis
I63.233	Cerebral infarction due to unspecified occlusion or stenosis of bilateral carotid arteries	ICD-10-CM	Diagnosis
I63.239	Cerebral infarction due to unspecified occlusion or stenosis of unspecified carotid artery	ICD-10-CM	Diagnosis
I63.29	Cerebral infarction due to unspecified occlusion or stenosis of other precerebral arteries	ICD-10-CM	Diagnosis
I63.30	Cerebral infarction due to thrombosis of unspecified cerebral artery	ICD-10-CM	Diagnosis

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
I63.311	Cerebral infarction due to thrombosis of right middle cerebral artery	ICD-10-CM	Diagnosis
I63.312	Cerebral infarction due to thrombosis of left middle cerebral artery	ICD-10-CM	Diagnosis
I63.313	Cerebral infarction due to thrombosis of bilateral middle cerebral arteries	ICD-10-CM	Diagnosis
I63.319	Cerebral infarction due to thrombosis of unspecified middle cerebral artery	ICD-10-CM	Diagnosis
I63.321	Cerebral infarction due to thrombosis of right anterior cerebral artery	ICD-10-CM	Diagnosis
I63.322	Cerebral infarction due to thrombosis of left anterior cerebral artery	ICD-10-CM	Diagnosis
I63.323	Cerebral infarction due to thrombosis of bilateral anterior cerebral arteries	ICD-10-CM	Diagnosis
I63.329	Cerebral infarction due to thrombosis of unspecified anterior cerebral artery	ICD-10-CM	Diagnosis
I63.331	Cerebral infarction due to thrombosis of right posterior cerebral artery	ICD-10-CM	Diagnosis
I63.332	Cerebral infarction due to thrombosis of left posterior cerebral artery	ICD-10-CM	Diagnosis
I63.333	Cerebral infarction due to thrombosis of bilateral posterior cerebral arteries	ICD-10-CM	Diagnosis
I63.339	Cerebral infarction due to thrombosis of unspecified posterior cerebral artery	ICD-10-CM	Diagnosis
I63.341	Cerebral infarction due to thrombosis of right cerebellar artery	ICD-10-CM	Diagnosis
I63.342	Cerebral infarction due to thrombosis of left cerebellar artery	ICD-10-CM	Diagnosis
I63.343	Cerebral infarction due to thrombosis of bilateral cerebellar arteries	ICD-10-CM	Diagnosis
I63.349	Cerebral infarction due to thrombosis of unspecified cerebellar artery	ICD-10-CM	Diagnosis
I63.39	Cerebral infarction due to thrombosis of other cerebral artery	ICD-10-CM	Diagnosis
I63.40	Cerebral infarction due to embolism of unspecified cerebral artery	ICD-10-CM	Diagnosis
I63.411	Cerebral infarction due to embolism of right middle cerebral artery	ICD-10-CM	Diagnosis
I63.412	Cerebral infarction due to embolism of left middle cerebral artery	ICD-10-CM	Diagnosis
I63.413	Cerebral infarction due to embolism of bilateral middle cerebral arteries	ICD-10-CM	Diagnosis
I63.419	Cerebral infarction due to embolism of unspecified middle cerebral artery	ICD-10-CM	Diagnosis
I63.421	Cerebral infarction due to embolism of right anterior cerebral artery	ICD-10-CM	Diagnosis
I63.422	Cerebral infarction due to embolism of left anterior cerebral artery	ICD-10-CM	Diagnosis
I63.423	Cerebral infarction due to embolism of bilateral anterior cerebral arteries	ICD-10-CM	Diagnosis
I63.429	Cerebral infarction due to embolism of unspecified anterior cerebral artery	ICD-10-CM	Diagnosis
I63.431	Cerebral infarction due to embolism of right posterior cerebral artery	ICD-10-CM	Diagnosis
I63.432	Cerebral infarction due to embolism of left posterior cerebral artery	ICD-10-CM	Diagnosis
I63.433	Cerebral infarction due to embolism of bilateral posterior cerebral arteries	ICD-10-CM	Diagnosis
I63.439	Cerebral infarction due to embolism of unspecified posterior cerebral artery	ICD-10-CM	Diagnosis
I63.441	Cerebral infarction due to embolism of right cerebellar artery	ICD-10-CM	Diagnosis
I63.442	Cerebral infarction due to embolism of left cerebellar artery	ICD-10-CM	Diagnosis
I63.443	Cerebral infarction due to embolism of bilateral cerebellar arteries	ICD-10-CM	Diagnosis
I63.449	Cerebral infarction due to embolism of unspecified cerebellar artery	ICD-10-CM	Diagnosis
I63.49	Cerebral infarction due to embolism of other cerebral artery	ICD-10-CM	Diagnosis
I63.50	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebral artery	ICD-10-CM	Diagnosis
I63.511	Cerebral infarction due to unspecified occlusion or stenosis of right middle cerebral artery	ICD-10-CM	Diagnosis
I63.512	Cerebral infarction due to unspecified occlusion or stenosis of left middle cerebral artery	ICD-10-CM	Diagnosis
I63.513	Cerebral infarction due to unspecified occlusion or stenosis of bilateral middle cerebral arteries	ICD-10-CM	Diagnosis
I63.519	Cerebral infarction due to unspecified occlusion or stenosis of unspecified middle cerebral artery	ICD-10-CM	Diagnosis
I63.521	Cerebral infarction due to unspecified occlusion or stenosis of right anterior cerebral artery	ICD-10-CM	Diagnosis
I63.522	Cerebral infarction due to unspecified occlusion or stenosis of left anterior cerebral artery	ICD-10-CM	Diagnosis

Appendix G. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
I63.523	Cerebral infarction due to unspecified occlusion or stenosis of bilateral anterior cerebral arteries	ICD-10-CM	Diagnosis
I63.529	Cerebral infarction due to unspecified occlusion or stenosis of unspecified anterior cerebral artery	ICD-10-CM	Diagnosis
I63.531	Cerebral infarction due to unspecified occlusion or stenosis of right posterior cerebral artery	ICD-10-CM	Diagnosis
I63.532	Cerebral infarction due to unspecified occlusion or stenosis of left posterior cerebral artery	ICD-10-CM	Diagnosis
I63.533	Cerebral infarction due to unspecified occlusion or stenosis of bilateral posterior cerebral arteries	ICD-10-CM	Diagnosis
I63.539	Cerebral infarction due to unspecified occlusion or stenosis of unspecified posterior cerebral artery	ICD-10-CM	Diagnosis
I63.541	Cerebral infarction due to unspecified occlusion or stenosis of right cerebellar artery	ICD-10-CM	Diagnosis
I63.542	Cerebral infarction due to unspecified occlusion or stenosis of left cerebellar artery	ICD-10-CM	Diagnosis
I63.543	Cerebral infarction due to unspecified occlusion or stenosis of bilateral cerebellar arteries	ICD-10-CM	Diagnosis
I63.549	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebellar artery	ICD-10-CM	Diagnosis
I63.59	Cerebral infarction due to unspecified occlusion or stenosis of other cerebral artery	ICD-10-CM	Diagnosis
I63.6	Cerebral infarction due to cerebral venous thrombosis, nonpyogenic	ICD-10-CM	Diagnosis
I63.8	Other cerebral infarction	ICD-10-CM	Diagnosis
I63.9	Cerebral infarction, unspecified	ICD-10-CM	Diagnosis
I67.89	Other cerebrovascular disease	ICD-10-CM	Diagnosis
Transient Ischemic Attack			
435	Transient cerebral ischemia	ICD-9-CM	Diagnosis
435.0	Basilar artery syndrome	ICD-9-CM	Diagnosis
435.1	Vertebral artery syndrome	ICD-9-CM	Diagnosis
435.2	Subclavian steal syndrome	ICD-9-CM	Diagnosis
435.3	Vertebrobasilar artery syndrome	ICD-9-CM	Diagnosis
435.8	Other specified transient cerebral ischemias	ICD-9-CM	Diagnosis
435.9	Unspecified transient cerebral ischemia	ICD-9-CM	Diagnosis
G45.0	Vertebro-basilar artery syndrome	ICD-10-CM	Diagnosis
G45.1	Carotid artery syndrome (hemispheric)	ICD-10-CM	Diagnosis
G45.2	Multiple and bilateral precerebral artery syndromes	ICD-10-CM	Diagnosis
G45.8	Other transient cerebral ischemic attacks and related syndromes	ICD-10-CM	Diagnosis
G45.9	Transient cerebral ischemic attack, unspecified	ICD-10-CM	Diagnosis
G46.0	Middle cerebral artery syndrome	ICD-10-CM	Diagnosis
G46.1	Anterior cerebral artery syndrome	ICD-10-CM	Diagnosis
G46.2	Posterior cerebral artery syndrome	ICD-10-CM	Diagnosis
I67.841	Reversible cerebrovascular vasoconstriction syndrome	ICD-10-CM	Diagnosis
I67.848	Other cerebrovascular vasospasm and vasoconstriction	ICD-10-CM	Diagnosis

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Angiotensin-Converting Enzyme Inhibitors and Angiotensin Receptor Blockers

Captopril hydrochlorothiazide
 Captopril
 Captopril tab 12.5 mg
 Captopril tab 25 mg
 Captopril tab 50 mg
 Enalapril maleate tab 2.5 mg
 Lisinopril
 Lisinopril tab 5 mg
 Lisinopril hydrochlorothiazide
 Lisinopril/hydrochlorothiazide
 Enalapril maleate hydrochlorothiazide tab 5 12.5 mg
 Enalapril maleate tab 5 mg
 Enalapril maleate tab 10 mg
 Enalapril maleate tab 20 mg
 Losartan potassium hydrochlorothiazide
 Losartan potassium/hydrochlorothiazide
 Enalapril maleate hydrochlorothiazide tab 10 25 mg
 Losartan potassium
 Nebivolol hcl/valsartan
 Irbesartan
 Irbesartan hydrochlorothiazide
 Irbesartan/hydrochlorothiazide
 Perindopril erbumine
 Trandolapril tab 1 mg
 Trandolapril tab 2 mg
 Trandolapril tab 4 mg
 Trandolapril verapamil hcl tab cr 2 180 mg
 Trandolapril verapamil hcl tab cr 2 240 mg
 Eprosartan mesylate tab 400 mg
 Eprosartan mesylate tab 600 mg
 Ramipril
 Telmisartan
 Telmisartan hydrochlorothiazide
 Telmisartan/hydrochlorothiazide
 Quinapril hydrochlorothiazide tab 20 12.5 mg
 Quinapril hcl hydrochlorothiazide
 Quinapril hcl/hydrochlorothiazide
 Quinapril hydrochlorothiazide tab 10 12.5 mg
 Quinapril hydrochlorothiazide tab 20 25 mg
 Quinapril hcl
 Trandolapril
 Eprosartan mesylate hydrochlorothiazide
 Eprosartan mesylate/hydrochlorothiazide
 Eprosartan mesylate
 Trandolapril verapamil hcl
 Trandolapril/verapamil hcl
 Valsartan hydrochlorothiazide
 Valsartan/hydrochlorothiazide
 Valsartan
 Amlodipine besylate benazepril hcl
 Amlodipine besylate/benazepril hcl

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Benazepril hcl
Benazepril hcl hydrochlorothiazide
Benazepril hcl/hydrochlorothiazide
Amlodipine besylate valsartan
Amlodipine besylate/valsartan
Amlodipine besylate valsartan hydrochlorothiazide
Amlodipine besylate/valsartan/hydrochlorothiazide
Aliskiren valsartan
Sacubitril valsartan
Sacubitril/valsartan
Fosinopril sodium
Fosinopril sodium hydrochlorothiazide
Moexipril hcl
Moexipril hcl hydrochlorothiazide
Moexipril hcl/hydrochlorothiazide
Enalapril maleate
Captopril/hydrochlorothiazide
Enalapril maleate hydrochlorothiazide
Enalapril maleate/hydrochlorothiazide
Olmesartan medoxomil/amlodipine besylate/hydrochlorothiazide
Amlodipine besylate/olmesartan medoxomil
Olmesartan medoxomil
Olmesartan medoxomil/hydrochlorothiazide
Enalaprilat dihydrate
Captopril hydrochlorothiazide tab 25 15 mg
Lisinopril tab 10 mg
Lisinopril tab 20 mg
Captopril hydrochlorothiazide tab 50 25 mg
Lisinopril hydrochlorothiazide tab 20 25 mg
Lisinopril hydrochlorothiazide tab 10 12.5 mg
Lisinopril hydrochlorothiazide tab 20 12.5 mg
Fosinopril sodium/hydrochlorothiazide
Enalapril maleate felodipine
Candesartan cilexetil
Candesartan cilexetil hydrochlorothiazide
Candesartan cilexetil/hydrochlorothiazide
Telmisartan amlodipine besylate
Telmisartan/amlodipine besylate
Amlodipine besylate benazepril hcl cap 2.5 10 mg
Amlodipine besylate benazepril hcl cap 5 10 mg
Amlodipine besylate benazepril hcl cap 5 20 mg
Amlodipine besylate benazepril hcl cap 10 20 mg
Losartan potassium tab 50 mg
Lisinopril tab 40 mg
Quinapril hcl tab 40 mg
Benazepril hcl tab 10 mg
Benazepril hcl tab 40 mg
Lisinopril tab 30 mg
Telmisartan hydrochlorothiazide tab 80 12.5 mg
Irbesartan tab 150 mg
Irbesartan tab 300 mg
Valsartan tab 80 mg

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Valsartan tab 160 mg
Valsartan hydrochlorothiazide tab 80 12.5 mg
Valsartan hydrochlorothiazide tab 160 12.5 mg
Valsartan hydrochlorothiazide tab 160 25 mg
Telmisartan hydrochlorothiazide tab 40 12.5 mg
Telmisartan hydrochlorothiazide tab 80 25 mg
Benazepril hcl tab 20 mg
Lisinopril tab 2.5 mg
Irbesartan tab 75 mg
Olmesartan medoxomil tab 20 mg
Olmesartan medoxomil tab 40 mg
Valsartan tab 40 mg
Losartan potassium tab 25 mg
Losartan potassium tab 100 mg
Losartan potassium hydrochlorothiazide tab 100 12.5 mg
Losartan potassium hydrochlorothiazide tab 100 25 mg
Ramipril cap 2.5 mg
Ramipril cap 5 mg
Ramipril cap 10 mg
Benazepril hydrochlorothiazide tab 10 12.5 mg
Captopril tab 100 mg
Losartan potassium hydrochlorothiazide tab 50 12.5 mg
Olmesartan medoxomil hydrochlorothiazide
Irbesartan hydrochlorothiazide tab 150 12.5 mg
Amlodipine besylate valsartan tab 10 320 mg
Amlodipine besylate valsartan tab 5 160 mg
Valsartan tab 320 mg
Valsartan hydrochlorothiazide tab 320 25 mg
Telmisartan tab 20 mg
Telmisartan tab 40 mg
Telmisartan tab 80 mg
Quinapril hcl tab 5 mg
Quinapril hcl tab 10 mg
Quinapril hcl tab 20 mg
Benazepril hcl tab 5 mg
Candesartan cilexetil tab 8 mg
Moexipril hcl tab 7.5 mg
Benazepril hydrochlorothiazide tab 5 6.25 mg
Benazepril hydrochlorothiazide tab 20 12.5 mg
Benazepril hydrochlorothiazide tab 20 25 mg
Amlodipine besylate benazepril hcl cap 5 40 mg
Amlodipine besylate benazepril hcl cap 10 40 mg
Fosinopril sodium hydrochlorothiazide tab 20 12.5 mg
Ramipril cap 1.25 mg
Amlodipine besylate olmesartan medoxomil
Fosinopril sodium tab 40 mg
Fosinopril sodium tab 20 mg
Azilsartan medoxomil
Azilsartan medoxomil chlorthalidone
Azilsartan medoxomil/chlorthalidone
Perindopril arginine amlodipine besylate
Perindopril arginine/amlodipine besylate

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Olmesartan medoxomil amlodipine besylate hydrochlorothiazide
Fosinopril sodium tab 10 mg
Candesartan cilexetil hydrochlorothiazide tab 32 12.5 mg
Valsartan hydrochlorothiazide tab 320 12.5 mg
Amlodipine besylate olmesartan medoxomil tab 10 20 mg
Olmesartan medoxomil hydrochlorothiazide tab 40 12.5 mg
Olmesartan medoxomil hydrochlorothiazide tab 20 12.5 mg
Lisinopril tab 20 mg dietary management cap pack
Lisinopril dietary supplement comb.10
Lisinopril/dietary supplement,comb.10
Amiodarone hcl
Amiodarone hcl tab 200 mg
Amiodarone hcl/dextrose 5 % in water
Amiodarone in dextrose, iso-osmotic
Amiodarone hcl tab 400 mg
Quinidine gluconate
Procainamide hcl
Ibutilide fumarate
Verapamil hcl
Disopyramide phosphate
Disopyramide phosphate cap 150 mg
Quinidine sulfate tab cr 300 mg
Propafenone hcl tab 150 mg
Propafenone hcl
Propafenone hcl tab 300 mg
Propafenone hcl tab 225 mg
Flecainide acetate
Mexiletine hcl
Dofetilide
Diltiazem hcl
Sotalol hcl
Quinidine sulfate
Phenytoin sodium
Lidocaine hcl/PF
Tocainide hcl
Lidocaine hcl in dextrose 5% in water/PF
Quinidine gluconate tab cr 324 mg
Adenosine
Esmolol hcl
Quinidine sulfate tab 300 mg
Quinidine sulfate tab 200 mg
Esmolol hcl in sodium chloride, iso-osmotic
Flecainide acetate tab 100 mg
Sotalol hcl tab 80 mg
Amiodarone hcl/dextrose 5 % in water
Amiodarone in dextrose, iso-osmotic
Esmolol hcl in sterile water
Sotalol hcl (afib afl) tab 120 mg
Sotalol hcl (afib afl) tab 80 mg
Adenosine in 0.9 % sodium chloride
Mexiletine hcl cap 150 mg
Mexiletine hcl cap 200 mg

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Mexiletine hcl cap 250 mg
Sotalol hcl tab 160 mg
Sotalol hcl tab 240 mg
Sotalol hcl tab 120 mg
Adenosine triphosphate
Morizine hcl
Morizine hcl tab 200 mg
Morizine hcl tab 300 mg
Flecainide acetate tab 50 mg
Procainamide hcl tab cr 750 mg
Procainamide hcl cap 375 mg
Sotalol hcl (afib afl) tab 160 mg
Procainamide hcl tab sr 12hr 500 mg
Procainamide hcl tab sr 12hr 1000 mg
Heparin sodium porcine
Fondaparinux sodium
Argatroban
Heparin sodium (bovine) inj 1000 unit ml
Heparin sodium beef
Heparin sodium (bovine) inj 5000 unit ml
Heparin sodium (bovine) inj 10000 unit ml
Dalteparin sodium porcine
Heparin sodium porcine pf
Heparin sodium,porcine/PF
Heparin sodium,porcine
Dalteparin sodium,porcine
Heparin sodium (porcine) inj 10000 unit ml
Heparin sodium (porcine) inj 2500 unit ml
Heparin sodium (porcine) inj 7500 unit ml
Heparin sodium (porcine) inj 5000 unit ml
Heparin sodium porcine normal saline pf
Heparin sodium porcine 0.5 normal saline
Heparin sodium porcine dextrose 5% water
Enoxaparin sodium
Enoxaparin sodium inj 10 mg 0.1ml (100 mg ml)
Argatroban in 0.9 % sodium chloride
Desirudin
Heparin sodium porcine normal saline
Heparin sodium,porcine/dextrose 5 % in water
Heparin sodium,porcine IN 0.9 % sodium chloride/PF
Bivalirudin in 0.9 % sodium chloride
Heparin sodium porcine in 0.9 % sodium chloride pf
Heparin sodium porcine in 0.45 % sodium chloride
Heparin sodium,porcine in 0.45 % sodium chloride
Heparin sodium porcine dextrose 5 % in water
Heparin sodium (porcine) 100 unit ml in d5w
Bivalirudin
Warfarin sodium
Heparin sodium (porcine) inj 1000 unit ml
Enoxaparin sodium inj 30 mg 0.3ml
Enoxaparin sodium inj 40 mg 0.4ml
Enoxaparin sodium inj 60 mg 0.6ml

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Enoxaparin sodium inj 80 mg 0.8ml
Enoxaparin sodium inj 100 mg ml
Enoxaparin sodium inj 120 mg 0.8ml
Enoxaparin sodium inj 150 mg ml
Argatroban in sodium chloride, iso-osmotic
Heparin sodium, porcine in 0.9 % sodium chloride
Heparin sodium porcine dextrose 5 % in water pf
Heparin sodium, porcine/dextrose 5 % in water/PF
Heparin sodium, porcine in 0.45 % sodium chloride/PF
Tinzaparin sodium porcine
Tinzaparin sodium, porcine
Lepirudin, recombinant
Heparin sodium porcine in 0.9 % sodium chloride
Tinzaparin sodium inj 20000 anti xa unit ml
Heparin sodium porcine in 1 2 normal saline
Heparin sodium porcine dextrose 5 % water
Prasugrel hydrochloride
Prasugrel hcl
Abciximab
Ticlopidine hcl
Vorapaxar sulfate
Cilostazol
Dipyridamole
Aspirin dipyridamole
Aspirin/dipyridamole
Eptifibatide
Clopidogrel bisulfate
Aspirin
Anagrelide hcl
Ticagrelor
Aspirin/calcium carbonate
Clopidogrel bisulfate tab 75 mg (base equiv)
Dipyridamole tab 50 mg
Dipyridamole tab 75 mg
Cangrelor tetrasodium
Cilostazol tab 100 mg
Clopidogrel bisulfate tab 300 mg (base equiv)
Tirofiban hcl monohydrate
Tirofiban hcl monohydrate in 0.9 % sodium chloride
Ticlopidine hcl tab 250 mg
Cilostazol tab 50 mg
Dipyridamole tab 25 mg
Aspirin dipyridamole cap sr 12hr 25 200 mg
Aspirin/omeprazole
Nadolol tab 40 mg
Nadolol
Nadolol tab 120 mg
Nadolol tab 20 mg
Nadolol tab 80 mg
Bisoprolol hydrochlorothiazide tab 5 6.25 mg
Bisoprolol hydrochlorothiazide tab 10 6.25 mg
Bisoprolol hydrochlorothiazide tab 2.5 6.25 mg

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Bisoprolol fumarate tab 5 mg
Bisoprolol fumarate tab 10 mg
Timolol maleate
Timolol maleate hydrochlorothiazide
Carvedilol phosphate
Carvedilol
Acebutolol hcl cap 200 mg
Acebutolol hcl
Betaxolol hcl
Betaxolol hcl tab 10 mg
Metoprolol tartrate hydrochlorothiazide
Metoprolol tartrate
Propranolol hcl
Propranolol hcl hydrochlorothiazide
Carteolol hcl
Metoprolol tartrate/hydrochlorothiazide
Penbutolol sulfate
Atenolol
Sotalol hcl
Bisoprolol fumarate
Nadolol bendroflumethiazide
Nadolol/bendroflumethiazide
Labetalol hcl
Pindolol
Labetalol hcl tab 100 mg
Labetalol hcl tab 200 mg
Labetalol hcl tab 300 mg
Metoprolol succinate
Bisoprolol fumarate hydrochlorothiazide
Bisoprolol fumarate/hydrochlorothiazide
Propranolol hydrochlorothiazide tab 40 25 mg
Atenolol tab 50 mg
Atenolol chlorthalidone
Atenolol/chlorthalidone
Metoprolol succinate hydrochlorothiazide
Metoprolol succinate/hydrochlorothiazide
Propranolol hcl/hydrochlorothiazide
Nebivolol hcl
Atenolol chlorthalidone tab 50 25 mg
Atenolol chlorthalidone tab 100 25 mg
Pindolol tab 10 mg
Esmolol hcl
Propranolol hcl tab 10 mg
Propranolol hcl tab 20 mg
Propranolol hcl tab 40 mg
Propranolol hcl tab 80 mg
Esmolol hcl in sodium chloride, iso-osmotic
Metoprolol tartrate tab 50 mg
Atenolol tab 100 mg
Atenolol tab 25 mg
Propranolol hcl cap sr 24hr 120 mg
Metoprolol succinate tab sr 24hr 50 mg

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Propranolol hcl cap sr 24hr 60 mg
Metoprolol tartrate tab 25 mg
Metoprolol succinate tab sr 24hr 100 mg
Metoprolol succinate tab sr 24hr 25 mg
Metoprolol tartrate tab 100 mg
Propranolol hcl cap sr 24hr 160 mg
Carvedilol tab 25 mg
Carvedilol tab 6.25 mg
Carvedilol tab 12.5 mg
Carvedilol tab 3.125 mg
Sotalol hcl tab 80 mg
Esmolol hcl in sterile water
Sotalol hcl (afib afl) tab 120 mg
Sotalol hcl (afib afl) tab 80 mg
Acebutolol hcl powder
Sotalol hcl tab 160 mg
Sotalol hcl tab 240 mg
Sotalol hcl tab 120 mg
Pindolol tab 5 mg
Propranolol hcl tab 60 mg
Metoprolol succinate tab sr 24hr 200 mg
Carvedilol phosphate cap sr 24hr 20 mg
Levetiracetam
Timolol maleate tab 10 mg
Propranolol hcl cap sr 24hr 80 mg
Sotalol hcl (afib afl) tab 160 mg
Labetalol in dextrose 5 % in water
Metoprolol hydrochlorothiazide tab 50 25 mg
Nebivolol hcl tab 2.5 mg (base equivalent)
Nebivolol hcl tab 20 mg (base equivalent)
Nebivolol hcl tab 10 mg (base equivalent)
Nebivolol hcl tab 5 mg (base equivalent)
Metoprolol tab 50 mg dietary management cap pack
Carvedilol tab 12.5 mg dietary management cap pack
Metoprolol tartrate dietary supplement comb.10
Metoprolol tartrate/dietary supplement,comb.10
Nicardipine hcl
Verapamil hcl
Nimodipine
Nifedipine
Nifedipine tab sr 24hr 30 mg
Nifedipine tab sr 24hr 60 mg
Verapamil hcl tab cr 180 mg
Verapamil hcl tab cr 240 mg
Verapamil hcl tab cr 120 mg
Bepridil hcl
Trandolapril verapamil hcl tab cr 2 180 mg
Trandolapril verapamil hcl tab cr 2 240 mg
Amlodipine besylate
Amlodipine besylate atorvastatin calcium
Nifedipine cap 10 mg
Diltiazem hcl

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Trandolapril verapamil hcl
Amlodipine besylate benazepril hcl
Amlodipine besylate valsartan
Amlodipine besylate valsartan hydrochlorothiazide
Aliskiren hemifumarate amlodipine besylate
Aliskiren hemifumarate amlodipine hydrochlorothiazide
Diltiazem hcl cap sr 12hr 90 mg
Diltiazem hcl cap sr 12hr 120 mg
Nicardipine hcl cap 20 mg
Verapamil hcl cap sr 24hr 180 mg
Diltiazem hcl tab 30 mg
Diltiazem hcl tab 60 mg
Diltiazem hcl tab 90 mg
Isradipine
Diltiazem hcl coated beads cap sr 24hr 120 mg
Diltiazem hcl coated beads cap sr 24hr 180 mg
Diltiazem hcl coated beads cap sr 24hr 240 mg
Enalapril maleate felodipine
Felodipine
Felodipine tab sr 24hr 2.5 mg
Felodipine tab sr 24hr 5 mg
Felodipine tab sr 24hr 10 mg
Nisoldipine
Verapamil hcl cap sr 24hr 120 mg
Verapamil hcl cap sr 24hr 240 mg
Verapamil hcl cap sr 24hr 360 mg
Telmisartan amlodipine besylate
Amlodipine besylate tab 2.5 mg
Amlodipine besylate tab 5 mg
Amlodipine besylate tab 10 mg
Amlodipine besylate benazepril hcl cap 2.5 10 mg
Amlodipine besylate benazepril hcl cap 5 10 mg
Amlodipine besylate benazepril hcl cap 5 20 mg
Amlodipine besylate benazepril hcl cap 10 20 mg
Nifedipine tab sr 24hr 90 mg
Nifedipine tab sr 24hr osmotic 90 mg
Verapamil hcl tab 80 mg
Verapamil hcl tab 120 mg
Nicardipine in sodium chloride, iso-osmotic
Nicardipine in dextrose, iso-osmotic
Clevidipine butyrate
Diltiazem hcl/dextrose 5 % in water
Nifedipine tab sr 24hr osmotic 60 mg
Nifedipine tab sr 24hr osmotic 30 mg
Diltiazem hcl extended release beads cap sr 24hr 180 mg
Diltiazem hcl tab 120 mg
Nicardipine hcl in 0.9 % sodium chloride
Amlodipine besylate valsartan tab 10 320 mg
Amlodipine besylate valsartan tab 5 160 mg
Diltiazem hcl coated beads cap sr 24hr 300 mg
Nimodipine cap 30 mg
Nifedipine cap 20 mg

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Diltiazem hcl cap sr 12hr 60 mg
Verapamil hcl tab sr 24hr (controlled onset) 180 mg
Verapamil hcl tab sr 24hr (controlled onset) 240 mg
Nisoldipine tab sr 24hr 30 mg
Diltiazem hcl extended release beads cap sr 24hr 120 mg
Diltiazem hcl extended release beads cap sr 24hr 240 mg
Amlodipine besylate benazepril hcl cap 5 40 mg
Amlodipine besylate benazepril hcl cap 10 40 mg
Verapamil hcl cap sr 24hr 100 mg
Diltiazem hcl cap sr 24hr 180 mg
Isradipine cap 2.5 mg
Diltiazem hcl cap sr 24hr 240 mg
Verapamil hcl cap sr 24hr 300 mg
Amlodipine besylate olmesartan medoxomil
Nifedipine tab sr 24hr osmotic release 60 mg
Nifedipine tab sr 24hr osmotic release 30 mg
Fosinopril sodium
Diltiazem hcl cap sr 24hr 120 mg
Diltiazem hcl in 0.9 % sodium chloride
Nicardipine in 5 % dextrose in water
Perindopril arginine amlodipine besylate
Olmesartan medoxomil amlodipine besylate hydrochlorothiazide
Amlodipine besylate olmesartan medoxomil tab 10 20 mg
Amlodipine tab 2.5 mg dietary management cap pack
Digoxin
Digoxin tab 0.125 mg
Digoxin oral soln 0.05 mg ml
Digoxin tab 0.25 mg
Digoxin tab 125 mcg (0.125 mg)
Digoxin tab 250 mcg (0.25 mg)
Dronedarone hydrochloride
Dronedarone hcl
Bumetanide
Torsemide
Ethacrynic acid
Furosemide
Furosemide oral soln 10 mg ml
Furosemide tab 20 mg
Furosemide tab 80 mg
Bumetanide tab 0.5 mg
Bumetanide tab 1 mg
Bumetanide tab 2 mg
Furosemide tab 40 mg
Furosemide in 0.9 % sodium chloride
Ethacrynate sodium
Torsemide tab 10 mg
Torsemide tab 5 mg
Torsemide tab 20 mg
Furosemide/dextrose 5 % in water
Amiloride hcl
Amiloride hcl hydrochlorothiazide
Triamterene hydrochlorothiazide

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Triamterene/hydrochlorothiazide
Spironolactone
Spironolactone hydrochlorothiazide
Spironolactone/hydrochlorothiazide
Eplerenone
Amiloride hcl/hydrochlorothiazide
Triamterene hydrochlorothiazide tab 75 50 mg
Triamterene hydrochlorothiazide cap 50 25 mg
Spironolactone hydrochlorothiazide tab 25 25 mg
Amiloride hydrochlorothiazide tab 5 50 mg
Triamterene hydrochlorothiazide tab 37.5 25 mg
Spironolactone tab 100 mg
Spironolactone tab 50 mg
Spironolactone tab 25 mg
Triamterene hydrochlorothiazide cap 37.5 25 mg
Triamterene
Amiloride hcl tab 5 mg
Captopril hydrochlorothiazide
Bendroflumethiazide
Bisoprolol hydrochlorothiazide tab 5 6.25 mg
Bisoprolol hydrochlorothiazide tab 10 6.25 mg
Bisoprolol hydrochlorothiazide tab 2.5 6.25 mg
Hydrochlorothiazide tab 25 mg
Timolol maleate hydrochlorothiazide
Lisinopril hydrochlorothiazide
Enalapril maleate hydrochlorothiazide tab 5 12.5 mg
Chlorothiazide
Methyldopa hydrochlorothiazide
Methyldopa chlorothiazide
Losartan potassium hydrochlorothiazide
Enalapril maleate hydrochlorothiazide tab 10 25 mg
Amiloride hcl hydrochlorothiazide
Triamterene hydrochlorothiazide
Irbesartan hydrochlorothiazide
Spironolactone hydrochlorothiazide
Metoprolol tartrate hydrochlorothiazide
Methyclothiazide
Propranolol hcl hydrochlorothiazide
Telmisartan hydrochlorothiazide
Hydrochlorothiazide
Polythiazide tab 1 mg
Polythiazide tab 2 mg
Prazosin hcl polythiazide
Quinapril hydrochlorothiazide tab 20 12.5 mg
Quinapril hcl hydrochlorothiazide
Quinapril hydrochlorothiazide tab 10 12.5 mg
Quinapril hydrochlorothiazide tab 20 25 mg
Eprosartan mesylate hydrochlorothiazide
Methyclothiazide tab 5 mg
Deserpidine methyclothiazide
Indapamide tab 2.5 mg
Indapamide

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Valsartan hydrochlorothiazide
Benazepril hcl hydrochlorothiazide
Aliskiren hemifumarate hydrochlorothiazide
Amlodipine besylate valsartan hydrochlorothiazide
Aliskiren hemifumarate amlodipine hydrochlorothiazide
Fosinopril sodium hydrochlorothiazide
Moexipril hcl hydrochlorothiazide
Indapamide tab 1.25 mg
Enalapril maleate hydrochlorothiazide
Hydrochlorothiazide cap 12.5 mg
Metolazone
Nadolol bendroflumethiazide
Hydrochlorothiazide tab 100 mg
Captopril hydrochlorothiazide tab 25 15 mg
Captopril hydrochlorothiazide tab 50 25 mg
Lisinopril hydrochlorothiazide tab 20 25 mg
Lisinopril hydrochlorothiazide tab 10 12.5 mg
Lisinopril hydrochlorothiazide tab 20 12.5 mg
Bisoprolol fumarate hydrochlorothiazide
Candesartan cilexetil hydrochlorothiazide
Propranolol hydrochlorothiazide tab 40 25 mg
Atenolol chlorthalidone
Metoprolol succinate hydrochlorothiazide
Clonidine hcl chlorthalidone
Chlorthalidone
Chlorothiazide sodium
Triamterene hydrochlorothiazide tab 75 50 mg
Atenolol chlorthalidone tab 50 25 mg
Atenolol chlorthalidone tab 100 25 mg
Chlorothiazide tab 500 mg
Hydralazine reserpine hydrochlorothiazide tab 25 0.1 15 mg
Triamterene hydrochlorothiazide cap 50 25 mg
Spironolactone hydrochlorothiazide tab 25 25 mg
Amiloride hydrochlorothiazide tab 5 50 mg
Triamterene hydrochlorothiazide tab 37.5 25 mg
Telmisartan hydrochlorothiazide tab 80 12.5 mg
Isosorbide dinitrate hydralazine hcl
Valsartan hydrochlorothiazide tab 80 12.5 mg
Valsartan hydrochlorothiazide tab 160 12.5 mg
Valsartan hydrochlorothiazide tab 160 25 mg
Telmisartan hydrochlorothiazide tab 40 12.5 mg
Telmisartan hydrochlorothiazide tab 80 25 mg
Hydrochlorothiazide tab 50 mg
Losartan potassium hydrochlorothiazide tab 100 12.5 mg
Losartan potassium hydrochlorothiazide tab 100 25 mg
Benazepril hydrochlorothiazide tab 10 12.5 mg
Losartan potassium hydrochlorothiazide tab 50 12.5 mg
Irbesartan hydrochlorothiazide tab 150 12.5 mg
Triamterene hydrochlorothiazide cap 37.5 25 mg
Valsartan hydrochlorothiazide tab 320 25 mg
Hydrochlorothiazide tab 12.5 mg
Metolazone tab 2.5 mg

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Metolazone tab 5 mg
 Hydralazine hcl hydrochlorothiazide
 Reserpine hydrochlorothiazide tab 0.125 25 mg
 Chlorthalidone tab 25 mg
 Hydroflumethiazide
 Methyldopa hydrochlorothiazide tab 250 25 mg
 Benazepril hydrochlorothiazide tab 5 6.25 mg
 Benazepril hydrochlorothiazide tab 20 12.5 mg
 Benazepril hydrochlorothiazide tab 20 25 mg
 Reserpine hydrochlorothiazide tab 0.125 50 mg
 Fosinopril sodium hydrochlorothiazide tab 20 12.5 mg
 Hydralazine hcl reserpine hydrochlorothiazide
 Bendroflumethiazide rauwolfia tab 4 50 mg
 Spironolactone
 Methyldopa hydrochlorothiazide tab 250 15 mg
 Trichlormethiazide tab 4 mg
 Azilsartan medoxomil chlorthalidone
 Candesartan cilexetil hydrochlorothiazide tab 32 12.5 mg
 Valsartan hydrochlorothiazide tab 320 12.5 mg
 Metoprolol hydrochlorothiazide tab 50 25 mg
 Estradiol valerate im in oil 40 mg ml
 Estradiol valerate im in oil 10 mg ml
 Estradiol valerate im in oil 20 mg ml
 Norgestrel ethinyl estradiol
 Levonorgestrel eth estra
 Estrogens conjugated bazedoxifene acetate
 Estrogens, conjugated/bazedoxifene acetate
 Estradiol testosterone cypionates im in oil 2 50 mg ml
 Estradiol cypionate
 Estradiol cypionate medroxyprogesterone acet
 Medroxyprogesterone ace estradiol cyp im susp 25 5 mg 0.5ml
 Estropipate
 Estradiol norethindrone acetate
 Estradiol
 Estradiol acetate
 Ethynodiol diacetate ethinyl estradiol tab 1 mg 50 mcg
 Ethynodiol d ethinyl estradiol
 Ethynodiol diacetate ethinyl estradiol tab 1 mg 35 mcg
 Methyltestosterone estrogens esterified
 Estrogens conjugated
 Estrogens, conjugated
 Estrogens conjugated tab 1.25 mg
 Estrogens conjugated tab 0.625 mg
 Estrogens conjugated medroxyprogesterone acet
 Estrogens, conjugated/medroxyprogesterone acetate
 Estrogens conjugated medroxyprogesterone acetate
 Desogestrel ethinyl estradiol
 Etonogestrel ethinyl estradiol
 Desogestrel ethinyl estradiol ethinyl estradiol
 Norgestimate ethinyl estradiol
 Norethindrone ethinyl estrad
 Norethindrone ethinyl estradiol tab 1 mg 35 mcg

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Estradiol norgestimate
Ethinyl estradiol norelgestromin
Ethinyl estradiol norethindrone acetate
Norethindrone a e estradiol ferrous fumarate
Norethindrone a e estradiol
Estradiol td patch biweekly 0.025 mg 24hr
Estradiol/norethindrone acetate
Estradiol td patch biweekly 0.05 mg 24hr
Estradiol td patch biweekly 0.1 mg 24hr
Estradiol td patch biweekly 0.0375 mg 24hr
Estradiol td patch biweekly 0.075 mg 24hr
Estradiol tab 0.5 mg
Norethindrone ethinyl estradiol ferrous fumarate
Norethindrone acetate ethinyl estradiol
Norethindrone acetate-ethinyl estradiol
Levonorgestrel eth estra ethinyl estradiol
Norethindrone acetate ethinyl estradiol ferrous fumarate
Ethinyl estradiol drospirenone
Estrone
Estradiol valerate
Testosterone enanthate estradiol valerate
Norelgestromin ethinyl estradiol
Etopipate tab 3 mg
Levonorgestrel ethinyl estradiol
Levonorgestrel ethinyl estradiol tab 0.1 mg 20 mcg
Estradiol tab 1.5 mg
Estradiol tab 1 mg
Norethindrone ethinyl estradiol fe chew tab 0.4 mg 35 mcg
Norethindrone ethinyl estradiol
Estrogens,esterified/methyltestosterone
Esterified estrogens methyltestosterone tab 0.625 1.25 mg
Esterified estrogens methyltestosterone tab 1.25 2.5 mg
Estrogens esterified methyltestosterone
Estradiol tab 2 mg
Levonorgestrel ethinyl estradiol (91 day) tab 0.15 0.03 mg
Estrogens conjugated tab 0.45 mg
Estradiol td patch weekly 0.05 mg 24hr
Estradiol td patch weekly 0.1 mg 24hr
Drospirenone ethinyl estradiol tab 3 0.03 mg
Desogestrel ethinyl estradiol tab 0.15 mg 30 mcg
Levonorgestrel ethinyl estradiol tab 0.10 mg 20 mcg
Norgestrel ethinyl estradiol tab 0.3 mg 30 mcg
Norgestimate ethinyl estradiol tab 0.25 mg 35 mcg
Drospirenone ethinyl estradiol tab 3 0.02 mg
Estradiol td patch weekly 0.025 mg 24hr
Drospirenone ethinyl estradiol levomefolate calcium
Estradiol valerate dienogest
Levonorgestrel ethinyl estradiol tab 0.15 mg 30 mcg
Estradiol hemihydrate drospirenone
Drospirenone/estradiol
Estradiol levonorgestrel
Estradiol/levonorgestrel

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Estradiol estriol progesterone micronized cream (cmpd kit)
 Estropipate tab 0.75 mg
 Estradiol/norgestimate
 Estrogens conj. Synthetic b
 Estrogens, conjugated, synthetic B
 Estrogens conj. Synthetic a
 Estrogens, conjugated, synthetic A
 Estropipate tab 1.5 mg
 Norethindrone ethinyl estradiol tab 0.5 mg 35 mcg
 Norethindrone eth estradiol tab 0.5 35 1 35 mg mcg (10 11)
 Norethindrone ace ethinyl estradiol tab 1 mg 20 mcg
 Norethindrone ace ethinyl estradiol fe tab 1.5 mg 30 mcg
 Ethinyl estradiol tab 0.02 mg
 Esterified estrogens tab 0.625 mg
 Esterified estrogens tab 0.3 mg
 Estrogens conjugated tab 0.9 mg
 Estrogens conjugated tab 0.3 mg
 Norgestrel ethinyl estradiol tab 0.5 mg 50 mcg
 Norethindrone ethinyl estradiol tab 0.4 mg 35 mcg
 Estradiol cypionate im in oil 5 mg ml
 Conj est 0.625(14) conj est medroxypro ac tab 0.625 5mg(14)
 Norethindrone acetate ethinyl estradiol tab 1 mg 5 mcg
 Norethindrone ace ethinyl estradiol fe tab 1 mg 20 mcg
 Norethindrone ethinyl estradiol fe chew tab 0.8 mg 25 mcg
 Norethin eth estradiol fe tab 1 mg 10 mcg (24) 10 mcg (2)
 Norelgestromin ethinyl estradiol td ptwk 150 35 mcg 24hr
 Norethindrone eth estradiol tab 0.5 35 0.75 35 1 35 mg mcg
 Levonorgestrel ethinyl estradiol and ethinyl estradiol
 Ethynodiol diacetate ethinyl estradiol
 Estrogens esterified
 Estrogens,esterified
 Esterified estrogens tab 1.25 mg
 Ethinyl estradiol
 Estrogens conjugated synthetic a tab 1.25 mg
 Estrogens conjugated synthetic a tab 0.625 mg
 Estrogens conjugated synthetic a tab 0.9 mg
 Esterified estrogens tab 2.5 mg
 Estrogens conjugated tab 2.5 mg
 Estradiol implant pellet 6 mg
 Estradiol implant pellet 10 mg
 Estradiol implant pellet 12.5 mg
 Estradiol implant pellet 18 mg
 Estradiol implant pellet 20 mg
 Estradiol implant pellet 25 mg
 Estradiol implant pellet 31 mg
 Estradiol implant pellet 37.5 mg
 Estradiol implant pellet 50 mg
 Norgestimate eth estrad tab 0.18 35 0.215 35 0.25 35 mg mcg
 Conjugated estrogen medroxyprogest acetate tab 0.3 1.5 mg
 Conjugated estrogen medroxyprogest acetate tab 0.45 1.5 mg
 Conjugated estrogen medroxyprogest acetate tab 0.625 2.5 mg
 Conjugated estrogen medroxyprogest acetate tab 0.625 5 mg

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Norelgestromin ethinyl estradiol td ptwk 150 20 mcg 24hr
Gemfibrozil tab 600 mg
Gemfibrozil
Fenofibric acid (choline)
Fenofibrate nanocrystallized
Fenofibrate micronized
Fenofibric acid
Fenofibrate micronized cap 67 mg
Fenofibrate micronized cap 134 mg
Fenofibrate micronized cap 200 mg
Fenofibrate,micronized
Fenofibrate
Choline fenofibrate cap dr 135 mg (fenofibric acid equiv)
Fenofibrate tab 48 mg
Fenofibrate tab 145 mg
Fenofibrate tab 160 mg
Fenofibrate tab 54 mg
Nizatidine
Famotidine
Famotidine tab 40 mg
Cimetidine hcl
Famotidine/PF
Cimetidine
Ranitidine hcl
Cimetidine tab 300 mg
Famotidine calcium carbonate magnesium
Famotidine/calcium carbonate/magnesium hydroxide
Famotidine ca carbonate mag hydroxide chew tab 10 800 165 mg
Ranitidine hcl tab 150 mg
Cimetidine tab 800 mg
Cimetidine tab 200 mg
Ranitidine hcl in 0.45 % sodium chloride
Cimetidine tab 400 mg
Cimetidine hcl soln 300 mg 5ml
Famotidine tab 20 mg
Famotidine in sodium chloride, iso-osmotic/PF
Ranitidine hcl tab 75 mg
Famotidine calcium carbonate magnesium hydroxide
Ranitidine hcl tab 300 mg
Famotidine tab 10 mg
Nizatidine cap 150 mg
Famotidine chew tab 20 mg
Famotidine ca carbonate mag hydroxide chew tab 10 800 185 mg
Ranitidine hcl syrup 15 mg ml (75 mg 5ml)
Ranitidine hcl for oral susp 22.4 mg ml (compound kit)
Nizatidine cap 300 mg
Diclofen dr tab 75mg ranitidine tab 150mg capsaicin cr thpk
Famotidine in 0.9 % sodium chloride
Ranitidine hcl tab 150 mg dietary management cap pack
Ranitidine hcl dietary supplement misc comb17
Ranitidine hcl/dietary supplement no.17
Ranitidine hcl dietary supplement misc.combo8

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Ranitidine hcl/dietary supplement no.8
Diclofen dr tab 75mg ranitidine tab 150mg lido cr 3.75% thpk
Ibuprofen famotidine
Ibuprofen/famotidine
Insulin lispro human rec.anlog
Insulin lispro
Insulin lispro (npl) insulin lispro human rec.anlog
Insulin lispro protamine and insulin lispro
Insulin glargine,human recombinant analog
Insulin (regular) inj 100 unit ml
Insulin pork purified
Insulin regular human rec
Insulin regular, human
Insulin regular human
Insulin isophane inj 100 unit ml
Insulin isophane pork pure
Insulin nph human recom
Insulin NPH human isophane
Nph human insulin isophane
Insulin zinc inj 100 unit ml
Insulin zinc pork purified
Insulin zinc human rec
Insulin zinc extend human rec
Insulin nph human recom insulin regular human rec
Insulin NPH human isophane/insulin regular, human
Nph human insulin isophane insulin regular human
Insulin lispro protamine insulin lispro
Insulin glargine human recombinant analog
Insulin regular human rec insulin release unit
Insulin regular human rec insulin release unit chbr ihlr
Insulin glargine human recombinant analog
Insulin glargine hum.rec.anlog
Insulin glulisine
Insulin reg hum rec buff
Insulin degludec
Insulin aspart (niacinamide)
Insulin aspart
Insulin aspart protamine human insulin aspart
Insulin aspart protamine human/insulin aspart
Insulin detemir
Diluent insulin aspart combination #1
Insulin lispro (human) inj 100 unit ml
Insulin isophane (human) inj 100 unit ml
Insulin regular (human) inj 100 unit ml
Insulin detemir inj 100 unit ml
Insulin aspart prot aspart (human) inj 100 unit ml (70 30)
Insulin glargine inj 100 unit ml
Insulin aspart inj 100 unit ml
Insulin isophane regular (human) inj 100 unit ml (70 30)
Insulin zinc (human) inj 100 unit ml
Insulin detemir soln pen injector 100 unit ml
Insulin glargine soln pen injector 100 unit ml

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Insulin lispro (human) soln pen injector 100 unit ml
Insulin aspart soln cartridge 100 unit ml
Insulin aspart soln pen injector 100 unit ml
Insulin aspart prot aspart sus pen inj 100 unit ml (70 30)
Insulin lispro prot lispro (human) inj 100 unit ml (75 25)
Saxagliptin hcl metformin hcl
Saxagliptin hcl/metformin hcl
Sitagliptin phosphate metformin hcl
Sitagliptin phosphate/metformin hcl
Ertugliflozin pidolate/metformin hcl
Rosiglitazone maleate metformin hcl
Rosiglitazone maleate/metformin hcl
Metformin hcl
Glyburide metformin hcl
Glyburide/metformin hcl
Glipizide metformin hcl
Glipizide/metformin hcl
Pioglitazone hcl metformin hcl
Pioglitazone hcl/metformin hcl
Glyburide micronized metformin hcl
Repaglinide metformin hcl
Repaglinide/metformin hcl
Metformin hcl tab 1000 mg
Dapagliflozin propanediol/metformin hcl
Dapagliflozin propanediol metformin hcl
Glyburide metformin tab 5 500 mg
Linagliptin metformin hcl
Linagliptin/metformin hcl
Empagliflozin metformin hcl
Empagliflozin/metformin hcl
Metformin hcl tab 500 mg
Metformin hcl tab 850 mg
Glyburide metformin tab 2.5 500 mg
Metformin hcl tab sr 24hr 500 mg
Alogliptin benzoate metformin hcl
Alogliptin benzoate/metformin hcl
Glipizide metformin hcl tab 2.5 500 mg
Glipizide metformin hcl tab 5 500 mg
Sitagliptin metformin hcl tab 50 1000 mg
Sitagliptin metformin hcl tab 50 500 mg
Butalbital aspirin caffeine
Canagliflozin metformin hcl
Canagliflozin/metformin hcl
Metformin hcl tab sr 24hr 750 mg
Propranolol hcl
Rosiglitazone maleate metformin hcl tab 4 500 mg
Pioglitazone hcl metformin hcl tab 15 850 mg
Sitagliptin metformin hcl tab sr 24hr 50 1000 mg
Metformin hcl tab 500 mg dietary management cap pack
Metformin caffeine amino acids#7 herbal comb#125 choline bit
Metformin/caffeine/amino acids 7/herbal comb 125/choline bit
Metformin amino acids comb. #7 herbal comb.#125 choline

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Metformin/amino acids no.7/herbal cmb.125/choline bitartrate
Nicotine
Nicotine inhaler system 10 mg (4 mg delivered)
Nicotine td patch 24hr 7 mg 24hr
Nicotine polacrilex
Varenicline tartrate
Bupropion hcl
Bupropion hcl
Nicotine td patch 24hr 14 mg 24hr
Nicotine polacrilex gum 2 mg
Nicotine polacrilex gum 4 mg
Calcium carbonate
Nicotine polacrilex lozenge 2 mg
Nicotine polacrilex lozenge 4 mg
Varenicline tartrate tab 0.5 mg (base equiv)
Varenicline tartrate tab 1 mg (base equiv)
Nicotine td patch 24hr 21 mg 24hr
Nicotine td patch 24hr 11 mg 24hr
Nicotine td patch 24hr 22 mg 24hr
Varenicline tartrate tab 0.5 mg x 11 tab 1 mg x 42 pack
Smoking deterrent filter
Silver nitrate
Nicotine bitartrate
Homeopathic products kit
Isosorbide mononitrate
Isosorbide dinitrate
Isosorbide dinitrate tab 10 mg
Isosorbide dinitrate tab 20 mg
Isosorbide dinitrate tab 30 mg
Isosorbide dinitrate sl tab 10 mg
Nitroglycerin
Nitroglycerin td patch 24hr 0.8 mg hr
Nitroglycerin td patch 24hr 0.1 mg hr
Nitroglycerin td patch 24hr 0.2 mg hr
Nitroglycerin td patch 24hr 0.3 mg hr
Nitroglycerin td patch 24hr 0.4 mg hr
Nitroglycerin td patch 24hr 0.6 mg hr
Nitroglycerin cap cr 2.5 mg
Isosorbide mononitrate tab sr 24hr 60 mg
Nitroglycerin oint 2%
Nitroglycerin in 5 % dextrose in water
Isosorbide dinitrate sl tab 2.5 mg
Isosorbide dinitrate hydralazine hcl
Isosorbide mononitrate tab sr 24hr 120 mg
Isosorbide mononitrate tab 20 mg
Nitroglycerin tl soln 0.4 mg spray (400 mcg spray)
Nitroglycerin sl tab 0.4 mg
Isosorbide mononitrate tab sr 24hr 30 mg
Amyl nitrite
Isosorbide dinitrate tab 5 mg
Isosorbide dinitrate tab cr 40 mg
Nitroglycerin cap cr 6.5 mg

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Nitroglycerin sl tab 0.3 mg
Nitroglycerin sl tab 0.6 mg
Dulaglutide
Dapagliflozin propanediol
Saxagliptin hydrochloride
Saxagliptin hcl
Saxagliptin hcl metformin hcl
Saxagliptin hcl/metformin hcl
Sitagliptin phosphate metformin hcl
Sitagliptin phosphate/metformin hcl
Sitagliptin phosphate
Sitagliptin phosphate simvastatin
Sitagliptin phosphate/simvastatin
Ertugliflozin pidolate
Ertugliflozin pidolate/sitagliptin phosphate
Ertugliflozin pidolate/metformin hcl
Rosiglitazone maleate glimepiride
Rosiglitazone maleate/glimepiride
Rosiglitazone maleate metformin hcl
Rosiglitazone maleate/metformin hcl
Miglitol
Acarbose
Rosiglitazone maleate glimepiride tab 4 1 mg
Rosiglitazone maleate glimepiride tab 4 2 mg
Rosiglitazone maleate glimepiride tab 4 4 mg
Rosiglitazone maleate
Nateglinide
Pioglitazone hcl
Pioglitazone hcl metformin hcl
Pioglitazone hcl/metformin hcl
Repaglinide
Repaglinide metformin hcl
Repaglinide/metformin hcl
Liraglutide
Insulin degludec/liraglutide
Albiglutide
Dapagliflozin propanediol/metformin hcl
Exenatide
Exenatide microspheres
Pramlintide acetate
Dapagliflozin propanediol/saxagliptin hcl
Fructose dextrose phosphoric acid oral soln
Linagliptin
Linagliptin metformin hcl
Linagliptin/metformin hcl
Empagliflozin
Empagliflozin/metformin hcl
Empagliflozin/linagliptin
Empagliflozin linagliptin
Pioglitazone glimepiride
Pioglitazone hcl/glimepiride
Miglitol tab 25 mg

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Pioglitazone hcl tab 15 mg (base equiv)
Pioglitazone hcl tab 30 mg (base equiv)
Pioglitazone hcl tab 45 mg (base equiv)
Sitagliptin phosphate tab 100 mg (base equiv)
Alogliptin benzoate
Alogliptin benzoate/metformin hcl
Alogliptin benzoate pioglitazone hcl
Alogliptin benzoate/pioglitazone hcl
Sitagliptin metformin hcl tab 50 1000 mg
Sitagliptin metformin hcl tab 50 500 mg
Rosiglitazone maleate tab 2 mg (base equiv)
Rosiglitazone maleate tab 4 mg (base equiv)
Rosiglitazone maleate tab 8 mg (base equiv)
Canagliflozin
Canagliflozin/metformin hcl
Acarbose tab 50 mg
Acarbose tab 25 mg
Nateglinide tab 120 mg
Repaglinide tab 2 mg
Liraglutide soln pen injector 18 mg 3ml (6 mg ml)
Rosiglitazone maleate metformin hcl tab 4 500 mg
Pioglitazone hcl metformin hcl tab 15 850 mg
Sitagliptin metformin hcl tab sr 24hr 50 1000 mg
Nateglinide tab 60 mg
Pioglitazone hcl glimepiride
Exenatide inj 5 mcg 0.02ml
Exenatide inj 10 mcg 0.04ml
Mifepristone
Naproxen
Ketorolac tromethamine
Naproxen sodium tab 550 mg
Naproxen sodium
Naproxen tab 375 mg
Naproxen tab 250 mg
Indomethacin
Rofecoxib
Sulindac
Ketoprofen
Flurbiprofen
Ibuprofen
Ibuprofen tab 800 mg
Oxaprozin
Diclofenac sodium misoprostol
Diclofenac sodium/misoprostol
Celecoxib
Valdecoxib
Diclofenac potassium
Diclofenac sodium
Nabumetone
Tolmetin sodium
Ibuprofen susp 100 mg 5ml
Ibuprofen tab 200 mg

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Etodolac
Etodolac tab sr 24hr 600 mg
Meloxicam
Diclofenac sodium tab delayed release 75 mg
Piroxicam
Piroxicam cap 20 mg
Hydrocodone/ibuprofen
Ibuprofen/diphenhydramine citrate
Ibuprofen/pseudoephedrine hcl
Naproxen tab 500 mg
Naproxen sodium tab 275 mg
Fenoprofen calcium
Etodolac tab 500 mg
Etodolac tab 400 mg
Flurbiprofen tab 100 mg
Sumatriptan succinate naproxen sodium
Sumatriptan succinate/naproxen sodium
Naproxen esomeprazole magnesium
Naproxen/esomeprazole magnesium
Fenoprofen calcium tab 600 mg
Tolmetin sodium tab 600 mg
Tolmetin sodium cap 400 mg
Ibuprofen/oxycodone hcl
Mefenamic acid
Indomethacin cap cr 75 mg
Naproxen sodium tab 220 mg
Naproxen sodium/pseudoephedrine hcl
Naproxen sodium cap 220 mg
Lansoprazole naproxen
Ibuprofen cap 200 mg
Ibuprofen diphenhydramine citrate
Ibuprofen diphenhydramine hcl
Ibuprofen/diphenhydramine hcl
Meclofenamate sodium cap 50 mg
Meclofenamate sodium
Indomethacin sodium
Celecoxib cap 200 mg
Diclofenac sodium tab delayed release 50 mg
Diclofenac sodium tab sr 24hr 100 mg
Indomethacin cap 25 mg
Naproxen tab ec 500 mg
Ibuprofen/phenylephrine hcl
Chlorpheniramine maleate/pseudoephedrine hcl/ibuprofen
Chlorpheniramine maleate/phenylephrine hcl/ibuprofen
Meclofenamate sodium cap 100 mg
Sulindac tab 150 mg
Sulindac tab 200 mg
Ibuprofen tab 600 mg
Ibuprofen tab 400 mg
Nabumetone tab 500 mg
Meloxicam tab 15 mg
Meloxicam tab 7.5 mg

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Indomethacin cap 50 mg
 Ketorolac tromethamine tab 10 mg
 Oxaprozin tab 600 mg
 Diclofenac epolamine
 Diclofenac sodium gel 1%
 Diclofenac w misoprostol tab 75 0.2 mg
 Nabumetone tab 750 mg
 Diclofenac sodium tab delayed release 25 mg
 Naproxen cream 10% (compound kit)
 Diclofenac gabapentin lidocaine hcl cream 5 5 2% (cmpd kit)
 Celecoxib cap 100 mg
 Diclofenac potassium tab 50 mg
 Etodolac tab sr 24hr 500 mg
 Ketoprofen cap 75 mg
 Piroxicam cap 10 mg
 Etodolac cap 300 mg
 Diclofenac w misoprostol tab 50 0.2 mg
 Naproxen esomeprazole magnesium tab dr 375 20 mg
 Naproxen sodium tab sr 24hr 375 mg (base equiv)
 Naproxen susp 125 mg 5ml
 Naproxen sodium/diphenhydramine hcl
 Naproxen tab 500 mg liniment topical gel kit
 Magnesium carbonate aluminum hydroxide alginic acid
 Ibuprofen lysine/PF
 Indomethacin submicronized
 Indomethacin, submicronized
 Diclofenac submicronized
 Meloxicam submicronized
 Meloxicam, submicronized
 Ibuprofen irritants counter irritants combination #2
 Meloxicam irritants counter irritants combination no.2
 Ketoprofen cream 5% (compound kit)
 Flurbiprofen cyclobenzaprine cream (cmpd kit)
 Ketoprofen baclofen gabapentin cream (cmpd kit)
 Ketoprofen lidocaine gabapentin cream (cmpd kit)
 Diclofenac potassium cap 25 mg
 Flurbiprofen baclofen lidocaine cream 15 4 5% (cmpd kit)
 Ketoprofen baclofen gabapentin lido crm 15 4 10 2% (cmp kit)
 Metaxalone tab 800 mg diclofenac sodium soln 1.5% kit
 Ketoprofen lidocaine hcl cream 10 2% (compound kit)
 Ketoprofen lidocaine gabapentin cream 5 2 5% (cmpd kit)
 Ketoprofen ketamine lidocaine cream 5 5 2% (compounding kit)
 Ketoprofen ketamine lidocaine cream 5 5 2% (compound kit)
 Rofecoxib tab 50 mg
 Valdecoxib tab 10 mg
 Valdecoxib tab 20 mg
 Etodolac tab sr 24hr 400 mg
 Ibuprofen cream 10% (compounding kit)
 Fenoprofen calcium cap 400 mg
 Ketorolac tromethamine gel 2% (cmpd kit) (base equiv)
 Ketoprofen (bulk) cream 10%
 Ketoprofen cap sr 24hr 200 mg

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Ketoprofen tab 12.5 mg
 Phenylbutazone tab 100 mg
 Rofecoxib tab 25 mg
 Fenoprofen calcium cap 200 mg
 Indomethacin suppos 50 mg
 Naproxen irritants counter irritants combination #2
 Prasterone cap 200 mg ibuprofen tab 400 mg kit
 Naproxen sodium tab sr 24hr 500 mg (base equiv)
 Rofecoxib tab 12.5 mg
 Etodolac cap 200 mg
 Ibuprofen caffeine vitamins b1 b2 b6 b12
 Ibuprofen/caffeine/vitamins b1, b2, b6, & b12
 Diclofenac sodium capsicum oleoresin
 Diclofenac sod tab dr 75 mg lido men methyl sal ptch kit
 Flurbiprofen tab 50 mg
 Mefenamic acid cap 250 mg
 Ketoprofen cap 50 mg
 Phenylephrine hcl ketorolac tromethamine
 Phenylephrine hcl/ketorolac tromethamine
 Gold sodium thiomalate
 Naproxen sodium tab 550 mg menthol gel 2% therapy pack
 Naproxen sodium menthol
 Flurbiprofen gabapent cycloben lido dexameth cr (cmp kit)
 Flurbiprofen baclofen cycloben lido cream (cmp kit)
 Naproxen tab 250 mg dietary management cap pack
 Meloxicam tab 7.5 mg dietary management cap pack
 Piroxicam cap 20 mg dietary management cap pack
 Ibuprofen tab 600 mg dietary management cap pack
 Naproxen tab 500 mg dietary management cap pack
 Ibuprofen tab 800 mg dietary management cap pack
 Naproxen dietary supplement misc. Cb.11
 Naproxen/dietary supplement,misc. Cb.11
 Diclofenac tab dr 25 mg dietary management cap pack
 Piroxicam dietary supplement misc. Cb.11
 Piroxicam/dietary supplement,misc. Cb.11
 Ibuprofen dietary supplement misc. Cb.11
 Ibuprofen/dietary supplement,misc. Cb.11
 Naproxen capsaicin menthol methyl salicylate
 Fluorouracil diclofenac sodium cream 5 1%
 Tamoxifen adapalene diclofenac cream 0.2 0.3 2% (cmpd kit)
 Amantadine gabapent diclofenac baclofen lido cr (cmpd kit)
 Diclofenac amitriptyline prilo lido cream (cmpd kit)
 Diclofenac tab 75mg ranitid tab 150mg lido prilo cr thpk
 Ketorolac tromethamine nasal spray 15.75 mg spray
 Naproxen capsaicin menthol
 Celecoxib capsaicin menthol
 Celecoxib lidocaine menthol
 Ibuprofen tab 800 mg multiple minerals cap therapy pack
 Ropivacaine hcl/epinephrine/clonidine hcl/ketorolac trometh
 Diclofenac td soln 1.5% camph men methyl sal patch kit
 Ibuprofen/famotidine
 Pantoprazole sodium

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Lansoprazole
Rabeprazole sodium
Omeprazole
Esomeprazole magnesium
Lansoprazole tab delayed release orally disintegrating 15 mg
Lansoprazole tab delayed release orally disintegrating 30 mg
Lansoprazole amoxicillin trihydrate clarithromycin
Lansoprazole/amoxicillin trihydrate/clarithromycin
Omeprazole magnesium
Naproxen esomeprazole magnesium
Naproxen/esomeprazole magnesium
Esomeprazole mag trihydrate
Esomeprazole sodium
Lansoprazole naproxen
Omeprazole sodium bicarbonate cap 20 1100 mg
Esomeprazole magnesium cap delayed release 40 mg
Esomeprazole magnesium cap delayed release 20 mg
Omeprazole cap delayed release 20 mg
Pantoprazole sodium ec tab 40 mg (base equiv)
Esomeprazole magnesium cap delayed release 20 mg (base eq)
Omeprazole cap delayed release 40 mg
Omeprazole sodium bicarbonate
Omeprazole/sodium bicarbonate
Omeprazole delayed release tab 20 mg
Lansoprazole cap delayed release 15 mg
Lansoprazole cap delayed release 30 mg
Pantoprazole sodium ec tab 20 mg (base equiv)
Omeprazole sodium bicarbonate cap 40 1100 mg
Omeprazole cap delayed release 10 mg
Naproxen esomeprazole magnesium tab dr 375 20 mg
Rabeprazole sodium ec tab 20 mg
Dexlansoprazole cap delayed release 60 mg
Dexlansoprazole cap delayed release 30 mg
Esomeprazole magnesium cap delayed release 40 mg (base eq)
Omeprazole susp 2 mg ml (compound kit)
Esomeprazole strontium
Dexlansoprazole
Colchicine
Esomeprazole magnesium/glycerin
Omeprazole clarithromycin amoxicillin trihydrate
Omeprazole/clarithromycin/amoxicillin trihydrate
Omeprazole magnesium delayed release tab 20 mg (base equiv)
Aspirin/omeprazole
Fluoxetine hcl
Olanzapine fluoxetine hcl
Paroxetine hcl
Sertraline hcl
Citalopram hydrobromide
Fluvoxamine maleate
Escitalopram oxalate
Fluoxetine hcl cap 40 mg
Sertraline hcl tab 25 mg

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Sertraline hcl tab 100 mg
Fluvoxamine maleate tab 50 mg
Fluvoxamine maleate tab 100 mg
Fluoxetine hcl cap 10 mg
Fluoxetine hcl cap 20 mg
Fluvoxamine maleate tab 25 mg
Citalopram hydrobromide tab 20 mg (base equiv)
Escitalopram oxalate tab 10 mg (base equiv)
Sertraline hcl tab 50 mg
Fluoxetine hcl solution 20 mg 5ml
Citalopram hydrobromide tab 40 mg (base equiv)
Citalopram hydrobromide tab 10 mg (base equiv)
Paroxetine hcl tab 20 mg
Paroxetine hcl tab 10 mg
Paroxetine hcl tab 30 mg
Escitalopram oxalate tab 5 mg (base equiv)
Paroxetine hcl tab sr 24hr 37.5 mg
Escitalopram oxalate tab 20 mg (base equiv)
Escitalopram tab 10 mg methylfolate b12 b6 d cap thpk
Fluvoxamine maleate cap sr 24hr 150 mg
Fluoxetine hcl tab 20 mg
Paroxetine hcl tab 40 mg
Zaleplon
Paroxetine mesylate
Paroxetine hcl tab sr 24hr 25 mg
Paroxetine hcl tab sr 24hr 12.5 mg
Fluoxetine hcl tab 10 mg
Fluoxetine hcl tab 60 mg
Citalopram tab 10 mg dietary management cap pack
Fluoxetine hcl cap 10 mg dietary management cap pack
Fluoxetine hcl dietary supplement misc comb17
Fluoxetine hcl/dietary supplement no.17
Fluoxetine hcl dietary supplement misc.combo8
Fluoxetine hcl/dietary supplement no.8
Pitavastatin calcium
Pravastatin sodium
Aspirin calcium carbonate magnesium pravastatin
Sitagliptin phosphate simvastatin
Simvastatin
Simvastatin tab 80 mg
Lovastatin
Lovastatin tab 20 mg
Amlodipine besylate atorvastatin calcium
Amlodipine besylate/atorvastatin calcium
Atorvastatin calcium
Niacin lovastatin
Niacin/lovastatin
Niacin simvastatin
Niacin/simvastatin
Fluvastatin sodium
Rosuvastatin calcium
Ezetimibe/simvastatin

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Atorvastatin calcium tab 10 mg (base equivalent)
Atorvastatin calcium tab 20 mg (base equivalent)
Atorvastatin calcium tab 40 mg (base equivalent)
Atorvastatin calcium tab 80 mg (base equivalent)
Pravastatin sodium tab 10 mg
Pravastatin sodium tab 20 mg
Pravastatin sodium tab 40 mg
Simvastatin tab 40 mg
Ezetimibe simvastatin
Fluvastatin sodium cap 20 mg
Simvastatin tab 20 mg
Simvastatin tab 5 mg
Simvastatin tab 10 mg
Rosuvastatin calcium tab 10 mg
Lovastatin tab 40 mg
Ezetimibe simvastatin tab 10 20 mg
Pravastatin sodium tab 80 mg
Rosuvastatin calcium tab 20 mg
Pitavastatin magnesium
Lovastatin tab 10 mg
Rosuvastatin calcium tab 5 mg
Ezetimibe simvastatin tab 10 40 mg
Ezetimibe simvastatin tab 10 80 mg
Fluvastatin sodium cap 40 mg
Ezetimibe atorvastatin calcium
Ezetimibe/atorvastatin calcium
Rosuvastatin calcium tab 40 mg
Atorvastatin tab 20 mg coenzyme q10 cap 100 mg ther pack
Rosiglitazone maleate glimepiride
Rosiglitazone maleate/glimepiride
Tolazamide
Glyburide
Glyburide micronized
Glyburide,micronized
Rosiglitazone maleate glimepiride tab 4 1 mg
Rosiglitazone maleate glimepiride tab 4 2 mg
Rosiglitazone maleate glimepiride tab 4 4 mg
Glimepiride
Glipizide
Chlorpropamide
Glyburide metformin hcl
Glyburide/metformin hcl
Glipizide metformin hcl
Glipizide/metformin hcl
Glyburide micronized metformin hcl
Chlorpropamide tab 100 mg
Tolbutamide
Glyburide metformin tab 5 500 mg
Acetohexamide
Chlorpropamide tab 250 mg
Pioglitazone glimepiride
Pioglitazone hcl/glimepiride

Appendix H. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

Glipizide tab 10 mg
Triamterene hydrochlorothiazide
Glyburide micronized tab 1.5 mg
Glipizide tab 5 mg
Glyburide tab 5 mg
Glipizide tab sr 24hr 2.5 mg
Glyburide tab 2.5 mg
Glimepiride tab 4 mg
Glimepiride tab 2 mg
Glyburide metformin tab 2.5 500 mg
Glipizide tab sr 24hr 5 mg
Glipizide tab sr 24hr 10 mg
Glimepiride tab 1 mg
Bulk chemicals powder
Glipizide metformin hcl tab 2.5 500 mg
Glipizide metformin hcl tab 5 500 mg
Tolazamide tab 250 mg
Tolazamide tab 500 mg
Glyburide micronized tab 3 mg
Glyburide tab 1.25 mg
Glyburide micronized tab 6 mg
Tolazamide tab 100 mg
Buspirone hcl
Pioglitazone hcl glimepiride
GLIPIZIDE TAB 10 MG
TRIAMTERENE HYDROCHLOROTHIAZIDE
GLYBURIDE MICRONIZED TAB 1.5 MG
GLIPIZIDE TAB 5 MG
GLYBURIDE TAB 5 MG
GLIPIZIDE TAB SR 24HR 2.5 MG
GLYBURIDE TAB 2.5 MG
GLIMEPIRIDE TAB 4 MG
GLIMEPIRIDE TAB 2 MG
GLYBURIDE METFORMIN TAB 2.5 500 MG
GLIPIZIDE TAB SR 24HR 5 MG
GLIPIZIDE TAB SR 24HR 10 MG
GLIMEPIRIDE TAB 1 MG
BULK CHEMICALS POWDER
GLIPIZIDE METFORMIN HCL TAB 2.5 500 MG
GLIPIZIDE METFORMIN HCL TAB 5 500 MG
TOLAZAMIDE TAB 250 MG
TOLAZAMIDE TAB 500 MG
GLYBURIDE MICRONIZED TAB 3 MG
GLYBURIDE TAB 1.25 MG
GLYBURIDE MICRONIZED TAB 6 MG
TOLAZAMIDE TAB 100 MG
BUSPIRONE HCL
PIOGLITAZONE HCL GLIMEPIRIDE

Appendix I.1. Specifications Defining Parameters for this Request, Comparison 1; Rivaroxaban vs Dabigatran, Comparison 2; Rivaroxaban vs Apixaban

This request used the Cohort Identification and Descriptive Analysis (CIDA) module, version 8.0.3 with additional programming, to investigate the comparative risk of thromboembolic stroke, intracranial hemorrhage, gastrointestinal bleeding, and extracranial bleeding outcomes among dabigatran, rivaroxaban, and apixaban users aged 64 years or younger in the Sentinel Distributed Database (SDD).

Query Period: October 19, 2010 to February 29, 2020
Coverage Requirement: Medical and drug coverage
Pre-Index Enrollment Requirement: 183 days
Enrollment Gap: 45 days
Age Groups: 21-49, 50-64 years
Envelope Macro: Off
Additional Programming Needed: Risk scores, daily dose requirement

	Comparison 1		Comparison 2	
	Exposure	Comparator	Exposure	Comparator
Medical Product	Rivaroxaban, 20 mg	Dabigatran, 150 mg	Rivaroxaban, 20 mg	Apixaban, 5 mg
Daily Dose Requirement	Once daily	Twice daily	Once daily	Twice daily
Request Package Group	riv_stroke	dab_stroke	riv_stroke	apx_stroke
Incident with Respect to:	Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin (all doses)		Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin (all doses)	
Incidence Assessment	Dispensing date or days supply		Dispensing date or days supply	
Washout (days)	183		183	
Cohort Definition	First valid incident exposure episode		First valid incident exposure episode	
Stockpiling Overlapping Claims	33%		33%	
Episode Gap (days)	3		3	
Episode Extension Period (days)	3		3	
Minimum Episode Duration	1		1	
Maximum Episode Duration (days)	None		None	
Minimum Days Supplied (days)	1		1	

Drug/Exposure Definition

Appendix I.1. Specifications Defining Parameters for this Request, Comparison 1; Rivaroxaban vs Dabigatran, Comparison 2; Rivaroxaban vs Apixaban

Drug/Exposure Definition	Censor Criteria	Death, Data Partner (DP) end date, disenrollment, event, end of exposure episode, comparator drug dispensing, low-dose of current exposure, warfarin dispensing, edoxaban dispensing, apixaban dispensing, kidney transplant, dialysis, institutional stay (IS) encounter, major extracranial bleeding, gastrointestinal hemorrhage, intracranial hemorrhage	Death, DP end date, disenrollment, event, end of exposure episode, comparator drug dispensing, low-dose of current exposure, warfarin dispensing, edoxaban dispensing, apixaban dispensing, kidney transplant, dialysis, institutional stay (IS) encounter, major extracranial bleeding, gastrointestinal hemorrhage, intracranial hemorrhage
	Pre-Existing Condition	Atrial fibrillation or flutter	Atrial fibrillation or flutter
	Include/Exclude	Include	Include
	Care Setting/Primary Diagnosis	Any	Any
Inclusion/Exclusion	Lookback Period (days)	-183, 0	-183, 0
	Pre-Existing Condition	Low-dose rivaroxaban, dabigatran, apixaban, edoxaban, warfarin	Low-dose rivaroxaban, dabigatran, apixaban, edoxaban, warfarin
	Include/Exclude	Exclude	Exclude
	Lookback Period (days)	0, 0	0, 0
	Pre-Existing Condition	Institutional stay encounter	Institutional stay encounter
	Include/Exclude	Exclude	Exclude
	Lookback Period (days)	0, 0	0, 0
	Pre-Existing Condition	Dialysis, kidney replacement, deep vein thrombosis, pulmonary embolism, joint replacement, mitral valve disease, valve replacement, valve repair	Dialysis, kidney replacement, deep vein thrombosis, pulmonary embolism, joint replacement, mitral valve disease, valve replacement, valve repair
	Include/Exclude	Exclude	Exclude
	Care Setting/Primary Diagnosis	Any, except ambulatory visit (AV)/other ambulatory (OA) for dialysis	Any, except AV/OA for dialysis
	Lookback Period (days)	-183, 0	-183, 0

Appendix I.1. Specifications Defining Parameters for this Request, Comparison 1; Rivaroxaban vs Dabigatran, Comparison 2; Rivaroxaban vs Apixaban

Event/ Outcome	Event/Outcome	Thromboembolic stroke	Thromboembolic stroke
	Care Setting/Primary Diagnosis	Inpatient primary (IPP)	IPP
	Washout (days)	0	0
	Blackout Period (days)	1	1
Propensity Score Matching	Covariates	See Appendix J	See Appendix J
	Matching Ratio	1:1	1:1
	Matching Caliper Settings	0.05	0.05
	Analysis Type	Conditional and unconditional	Conditional and unconditional
Subgroup Analyses	Stratifying variable	Age group	Age group
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	Sex	Sex
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	Antiplatelet drug use	Antiplatelet drug use
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	CHA ₂ DS ₂ -VASc score (0, 1, 2, 3, 4, 5, ≥6)	CHA ₂ DS ₂ -VASc score (0, 1, 2, 3, 4, 5, ≥6)
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	HAS-BLED score (0, 1, 2, 3, ≥4)	HAS-BLED score (0, 1, 2, 3, ≥4)
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort

International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), Healthcare Common Procedure Coding System (HCPCS), and Current Procedural Terminology, Fourth Edition (CPT-4) codes are provided by Optum360. National Drug Codes (NDC) codes are checked against First Data Bank's "National Drug Data File (NDDF®) Plus."

Appendix I.2. Specifications Defining Parameters for this Request, Comparison 3; Dabigatran vs Apixaban, Comparison 4; Rivaroxaban vs Dabigatran

This request used the Cohort Identification and Descriptive Analysis (CIDA) module, version 8.0.3 with additional programming, to investigate the comparative risk of thromboembolic stroke, intracranial hemorrhage, gastrointestinal bleeding, and extracranial bleeding outcomes among dabigatran, rivaroxaban, and apixaban users aged 64 years or younger in the Sentinel Distributed Database (SDD).

Query Period: October 19, 2010 to February 29, 2020
Coverage Requirement: Medical and drug coverage
Pre-Index Enrollment Requirement: 183 days
Enrollment Gap: 45 days
Age Groups: 21-49, 50-64 years
Envelope Macro: Off
Additional Programming Needed: Risk scores, daily dose requirement

	Comparison 3		Comparison 4	
	Exposure	Comparator	Exposure	Comparator
Medical Product	Dabigatran, 150 mg	Apixaban, 5 mg	Rivaroxaban, 20 mg	Dabigatran, 150 mg
Daily Dose Requirement	Twice daily	Twice daily	Once daily	Twice daily
Request Package Group	dab_stroke	apx_stroke	riv_meb	dab_meb
Incident with Respect to:	Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin (all doses)		Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin (all doses)	
Incidence Assessment	Dispensing date or days supply		Dispensing date or days supply	
Washout (days)	183		183	
Cohort Definition	First valid incident exposure episode		First valid incident exposure episode	
Stockpiling Overlapping Claims	33%		33%	
Episode Gap (days)	3		3	
Episode Extension Period (days)	3		3	
Minimum Episode Duration	1		1	
Maximum Episode Duration (days)	None		None	
Minimum Days Supplied (days)	1		1	

Drug/Exposure Definition

Appendix I.2. Specifications Defining Parameters for this Request, Comparison 3; Dabigatran vs Apixaban, Comparison 4; Rivaroxaban vs Dabigatran

Drug/Exposure Definition	Censor Criteria	Death, Data Partner (DP) end date, disenrollment, event, end of exposure episode, comparator drug dispensing, low-dose of current exposure, warfarin dispensing, edoxaban dispensing, apixaban dispensing, kidney transplant, dialysis, institutional stay (IS) encounter, major extracranial bleeding, gastrointestinal hemorrhage, intracranial hemorrhage	Death, DP end date, disenrollment, event, end of exposure episode, comparator drug dispensing, low-dose of current exposure, warfarin dispensing, edoxaban dispensing, apixaban dispensing, kidney transplant, dialysis, institutional stay (IS) encounter, major extracranial bleeding, gastrointestinal hemorrhage, intracranial hemorrhage
	Pre-Existing Condition	Atrial fibrillation or flutter	Atrial fibrillation or flutter
	Include/Exclude	Include	Include
	Care Setting/Primary Diagnosis	Any	Any
	Lookback Period (days)	-183, 0	-183, 0
Inclusion/Exclusion	Pre-Existing Condition	Low-dose rivaroxaban, dabigatran, apixaban, edoxaban, warfarin	Low-dose rivaroxaban, dabigatran, apixaban, edoxaban, warfarin
	Include/Exclude	Exclude	Exclude
	Lookback Period (days)	0, 0	0, 0
	Pre-Existing Condition	Institutional stay encounter	Institutional stay encounter
	Include/Exclude	Exclude	Exclude
	Lookback Period (days)	0, 0	0, 0
	Pre-Existing Condition	Dialysis, kidney replacement, deep vein thrombosis, pulmonary embolism, joint replacement, mitral valve disease, valve replacement, valve repair	Dialysis, kidney replacement, deep vein thrombosis, pulmonary embolism, joint replacement, mitral valve disease, valve replacement, valve repair
	Include/Exclude	Exclude	Exclude
	Care Setting/Primary Diagnosis	Any, except ambulatory visit (AV)/other ambulatory (OA) for dialysis	Any, except AV/OA for dialysis
	Lookback Period (days)	-183, 0	-183, 0

Appendix I.2. Specifications Defining Parameters for this Request, Comparison 3; Dabigatran vs Apixaban, Comparison 4; Rivaroxaban vs Dabigatran

Event/ Outcome	Event/Outcome	Thromboembolic stroke	Major Extracranial Bleeding ¹
	Care Setting/Primary Diagnosis	Inpatient primary (IPP)	IPP
	Washout (days)	0	0
	Blackout Period (days)	1	1
Propensity Score Matching	Covariates	See Appendix J	See Appendix J
	Matching Ratio	1:1	1:1
	Matching Caliper Settings	0.05	0.05
	Analysis Type	Conditional and unconditional	Conditional and unconditional
Subgroup Analyses	Stratifying variable	Age group	Age group
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	Sex	Sex
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	Antiplatelet drug use	Antiplatelet drug use
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	CHA ₂ DS ₂ -VASc score (0, 1, 2, 3, 4, 5, ≥6)	CHA ₂ DS ₂ -VASc score (0, 1, 2, 3, 4, 5, ≥6)
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
Stratifying variable	HAS-BLED score (0, 1, 2, 3, ≥4)	HAS-BLED score (0, 1, 2, 3, ≥4)	
Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort	

¹The major extracranial bleed outcome is defined as **a)** one code from "MEB_1" tab in the primary inpatient position AND no code from "MEB_trauma_exclusion" on the same day OR **b)** one code from "MEB_2" in the primary inpatient position AND one code from "MEB_1" in secondary or unspecified inpatient position on the same day AND no code from "MEB_trauma_exclusion" on the same day

International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), Healthcare Common Procedure Coding System (HCPCS), and Current Procedural Terminology, Fourth Edition (CPT-4) codes are provided by Optum360. National Drug Codes (NDC) codes are checked against First Data Bank's "National Drug Data File (NDDF®) Plus."

Appendix I.3. Specifications Defining Parameters for this Request, Comparison 5; Rivaroxaban vs Apixaban, Comparison 6; Dabigatran vs Apixaban

This request used the Cohort Identification and Descriptive Analysis (CIDA) module, version 8.0.3 with additional programming, to investigate the comparative risk of thromboembolic stroke, intracranial hemorrhage, gastrointestinal bleeding, and extracranial bleeding outcomes among dabigatran, rivaroxaban, and apixaban users aged 64 years or younger in the Sentinel Distributed Database (SDD).

Query Period: October 19, 2010 to February 29, 2020
Coverage Requirement: Medical and drug coverage
Pre-Index Enrollment Requirement: 183 days
Enrollment Gap: 45 days
Age Groups: 21-49, 50-64 years
Envelope Macro: Off
Additional Programming Needed: Risk scores, daily dose requirement

	Comparison 5		Comparison 6	
	Exposure	Comparator	Exposure	Comparator
Medical Product	Rivaroxaban, 20 mg	Apixaban, 5 mg	Dabigatran, 150 mg	Apixaban, 5 mg
Daily Dose Requirement	Once daily	Twice daily	Twice daily	Twice daily
Request Package Group	riv_meb	apx_meb	dab_meb	apx_meb
Incident with Respect to:	Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin (all doses)		Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin (all doses)	
Incidence Assessment	Dispensing date or days supply		Dispensing date or days supply	
Washout (days)	183		183	
Cohort Definition	First valid incident exposure episode		First valid incident exposure episode	
Stockpiling Overlapping Claims	33%		33%	
Episode Gap (days)	3		3	
Episode Extension Period (days)	3		3	
Minimum Episode Duration (days)	1		1	
Maximum Episode Duration (days)	None		None	
Minimum Days Supplied (days)	1		1	

Drug/Exposure Definition

Appendix I.3. Specifications Defining Parameters for this Request, Comparison 5; Rivaroxaban vs Apixaban, Comparison 6; Dabigatran vs Apixaban

Drug/Exposure Definition	Tensor Criteria	Death, Data Partner (DP) end date, disenrollment, event, end of exposure episode, comparator drug dispensing, low-dose of current exposure, warfarin dispensing, edoxaban dispensing, apixaban dispensing, kidney transplant, dialysis, institutional stay (IS) encounter, major extracranial bleeding, gastrointestinal hemorrhage, intracranial hemorrhage	Death, DP end date, disenrollment, event, end of exposure episode, comparator drug dispensing, low-dose of current exposure, warfarin dispensing, edoxaban dispensing, apixaban dispensing, kidney transplant, dialysis, institutional stay (IS) encounter, major extracranial bleeding, gastrointestinal hemorrhage, intracranial hemorrhage
	Inclusion/Exclusion	Pre-Existing Condition	Atrial fibrillation or flutter
Include/Exclude		Include	Include
Care Setting/Primary Diagnosis		Any	Any
Lookback Period (days)		-183, 0	-183, 0
Pre-Existing Condition		Low-dose rivaroxaban, dabigatran, apixaban, edoxaban, warfarin	Low-dose rivaroxaban, dabigatran, apixaban, edoxaban, warfarin
Include/Exclude		Exclude	Exclude
Lookback Period (days)		0, 0	0, 0
Pre-Existing Condition		Institutional stay encounter	Institutional stay encounter
Include/Exclude		Exclude	Exclude
Lookback Period (days)		0, 0	0, 0
Pre-Existing Condition		Dialysis, kidney replacement, deep vein thrombosis, pulmonary embolism, joint replacement, mitral valve disease, valve replacement, valve repair	Dialysis, kidney replacement, deep vein thrombosis, pulmonary embolism, joint replacement, mitral valve disease, valve replacement, valve repair
Include/Exclude		Exclude	Exclude
Care Setting/Primary Diagnosis		Any, except ambulatory visit (AV)/other ambulatory (OA) for dialysis	Any, except AV/OA for dialysis
Lookback Period (days)		-183, 0	-183, 0

Appendix I.3. Specifications Defining Parameters for this Request, Comparison 5; Rivaroxaban vs Apixaban, Comparison 6; Dabigatran vs Apixaban

Event/ Outcome	Event/Outcome	Major Extracranial Bleeding ¹	Major Extracranial Bleeding ¹
	Care Setting/Primary Diagnosis	Inpatient primary (IPP)	IPP
	Washout (days)	0	0
	Blackout Period (days)	1	1
Propensity Score Matching	Covariates	See Appendix J	See Appendix J
	Matching Ratio	1:1	1:1
	Matching Caliper Settings	0.05	0.05
	Analysis Type	Conditional and unconditional	Conditional and unconditional
Subgroup Analyses	Stratifying variable	Age group	Age group
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	Sex	Sex
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	Antiplatelet drug use	Antiplatelet drug use
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	CHA ₂ DS ₂ -VAsc score (0, 1, 2, 3, 4, 5, ≥6)	CHA ₂ DS ₂ -VAsc score (0, 1, 2, 3, 4, 5, ≥6)
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	HAS-BLED score (0, 1, 2, 3, ≥4)	HAS-BLED score (0, 1, 2, 3, ≥4)
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort

¹The major extracranial bleed outcome is defined as **a)** one code from "MEB_1" tab in the primary inpatient position AND no code from "MEB_trauma_exclusion" on the same day OR **b)** one code from "MEB_2" in the primary inpatient position AND one code from "MEB_1" in secondary or unspecified inpatient position on the same day AND no code from "MEB_trauma_exclusion" on the same day

International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), Healthcare Common Procedure Coding System (HCPCS), and Current Procedural Terminology, Fourth Edition (CPT-4) codes are provided by Optum360. National Drug Codes (NDC) codes are checked against First Data Bank's "National Drug Data File (NDDF®) Plus."

Appendix I.4. Specifications Defining Parameters for this Request, Comparison 7; Rivaroxaban vs Dabigatran, Comparison 8; Rivaroxaban vs Apixaban

This request used the Cohort Identification and Descriptive Analysis (CIDA) module, version 8.0.3 with additional programming, to investigate the comparative risk of thromboembolic stroke, intracranial hemorrhage, gastrointestinal bleeding, and extracranial bleeding outcomes among dabigatran, rivaroxaban, and apixaban users aged 64 years or younger in the Sentinel Distributed Database (SDD).

Query Period: October 19, 2010 to February 29, 2020
Coverage Requirement: Medical and drug coverage
Pre-Index Enrollment Requirement: 183 days
Enrollment Gap: 45 days
Age Groups: 21-49, 50-64 years
Envelope Macro: Off
Additional Programming Needed: Risk scores, daily dose requirement

Drug/Exposure Definition

	Comparison 7		Comparison 8	
	Exposure	Comparator	Exposure	Comparator
Medical Product	Rivaroxaban, 20 mg	Dabigatran, 150 mg	Rivaroxaban, 20 mg	Apixaban, 5 mg
Daily Dose Requirement	Once daily	Twice daily	Once daily	Twice daily
Request Package Group	riv_gi	dab_gi	riv_gi	apx_gi
Incident with Respect to:	Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin (all doses)		Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin (all doses)	
Incidence Assessment	Dispensing date or days supply		Dispensing date or days supply	
Washout (days)	183		183	
Cohort Definition	First valid incident exposure episode		First valid incident exposure episode	
Stockpiling Overlapping Claims	33%		33%	
Episode Gap (days)	3		3	
Episode Extension Period (days)	3		3	
Minimum Episode Duration (days)	1		1	
Maximum Episode Duration (days)	None		None	
Minimum Days Supplied (days)	1		1	

Appendix I.4. Specifications Defining Parameters for this Request, Comparison 7; Rivaroxaban vs Dabigatran, Comparison 8; Rivaroxaban vs Apixaban

Drug/Exposure Definition	Censor Criteria	Death, Data Partner (DP) end date, disenrollment, event, end of exposure episode, comparator drug dispensing, low-dose of current exposure, warfarin dispensing, edoxaban dispensing, apixaban dispensing, kidney transplant, dialysis, institutional stay (IS) encounter, major extracranial bleeding, gastrointestinal hemorrhage, intracranial hemorrhage	Death, DP end date, disenrollment, event, end of exposure episode, comparator drug dispensing, low-dose of current exposure, warfarin dispensing, edoxaban dispensing, apixaban dispensing, kidney transplant, dialysis, institutional stay (IS) encounter, major extracranial bleeding, gastrointestinal hemorrhage, intracranial hemorrhage
	Inclusion/Exclusion	Pre-Existing Condition	Atrial fibrillation or flutter
Include/Exclude		Include	Include
Care Setting/Primary Diagnosis		Any	Any
Lookback Period (days)		-183, 0	-183, 0
Pre-Existing Condition		Low-dose rivaroxaban, dabigatran, apixaban, edoxaban, warfarin	Low-dose rivaroxaban, dabigatran, apixaban, edoxaban, warfarin
Include/Exclude		Exclude	Exclude
Lookback Period (days)		0, 0	0, 0
Pre-Existing Condition		Institutional stay encounter	Institutional stay encounter
Include/Exclude		Exclude	Exclude
Lookback Period (days)		0, 0	0, 0
Pre-Existing Condition		Dialysis, kidney replacement, deep vein thrombosis, pulmonary embolism, joint replacement, mitral valve disease, valve replacement, valve repair	Dialysis, kidney replacement, deep vein thrombosis, pulmonary embolism, joint replacement, mitral valve disease, valve replacement, valve repair
Include/Exclude		Exclude	Exclude
Care Setting/Primary Diagnosis		Any, except ambulatory visit (AV)/other ambulatory (OA) for dialysis	Any, except AV/OA for dialysis
Lookback Period (days)		-183, 0	-183, 0

Appendix I.4. Specifications Defining Parameters for this Request, Comparison 7; Rivaroxaban vs Dabigatran, Comparison 8; Rivaroxaban vs Apixaban

Event/ Outcome	Event/Outcome	Gastrointestinal hemorrhage ¹	Gastrointestinal hemorrhage ¹
	Care Setting/Primary Diagnosis	Inpatient primary (IPP)	IPP
	Washout (days)	0	0
	Blackout Period (days)	1	1
Propensity Score Matching	Covariates	See Appendix J	See Appendix J
	Matching Ratio	1:1	1:1
	Matching Caliper Settings	0.05	0.05
	Analysis Type	Conditional and unconditional	Conditional and unconditional
Subgroup Analyses	Stratifying variable	Age group	Age group
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	Sex	Sex
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	Antiplatelet drug use	Antiplatelet drug use
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	CHA ₂ DS ₂ -VAsc score (0, 1, 2, 3, 4, 5, ≥6)	CHA ₂ DS ₂ -VAsc score (0, 1, 2, 3, 4, 5, ≥6)
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	HAS-BLED score (0, 1, 2, 3, ≥4)	HAS-BLED score (0, 1, 2, 3, ≥4)
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort

¹The gastrointestinal hemorrhage outcome is defined as **a)** one code from "GI_1" tab in the primary inpatient position OR **b)** one code from "GI_2" in the primary inpatient position AND one code from "GI_1" in secondary or unspecified inpatient position on the same day

International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), Healthcare Common Procedure Coding System (HCPCS), and Current Procedural Terminology, Fourth Edition (CPT-4) codes are provided by Optum360. National Drug Codes (NDC) codes are checked against First Data Bank's "National Drug Data File (NDDF®) Plus."

Appendix I.5. Specifications Defining Parameters for this Request, Comparison 9; Dabigatran vs Apixaban, Comparison 10; Rivaroxaban vs Dabigatran

This request used the Cohort Identification and Descriptive Analysis (CIDA) module, version 8.0.3 with additional programming, to investigate the comparative risk of thromboembolic stroke, intracranial hemorrhage, gastrointestinal bleeding, and extracranial bleeding outcomes among dabigatran, rivaroxaban, and apixaban users aged 64 years or younger in the Sentinel Distributed Database (SDD).

Query Period: October 19, 2010 to February 29, 2020
Coverage Requirement: Medical and drug coverage
Pre-Index Enrollment Requirement: 183 days
Enrollment Gap: 45 days
Age Groups: 21-49, 50-64 years
Envelope Macro: Off
Additional Programming Needed: Risk scores, daily dose requirement

	Comparison 9		Comparison 10	
	Exposure	Comparator	Exposure	Comparator
Medical Product	Dabigatran, 150 mg	Apixaban, 5 mg	Rivaroxaban, 20 mg	Dabigatran, 150 mg
Daily Dose Requirement	Twice daily	Twice daily	Once daily	Twice daily
Request Package Group	dab_gi	apx_gi	riv_ich	dab_ich
Incident with Respect to:	Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin (all doses)		Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin (all doses)	
Incidence Assessment	Dispensing date or days supply		Dispensing date or days supply	
Washout (days)	183		183	
Cohort Definition	First valid incident exposure episode		First valid incident exposure episode	
Stockpiling Overlapping Claims	33%		33%	
Episode Gap (days)	3		3	
Episode Extension Period (days)	3		3	
Minimum Episode Duration (days)	1		1	
Maximum Episode Duration (days)	None		None	
Minimum Days Supplied (days)	1		1	

Drug/Exposure Definition

Appendix I.5. Specifications Defining Parameters for this Request, Comparison 9; Dabigatran vs Apixaban, Comparison 10; Rivaroxaban vs Dabigatran

Drug/Exposure Definition	Censor Criteria	Death, Data Partner (DP) end date, disenrollment, event, end of exposure episode, comparator drug dispensing, low-dose of current exposure, warfarin dispensing, edoxaban dispensing, apixaban dispensing, kidney transplant, dialysis, institutional stay (IS) encounter, major extracranial bleeding, gastrointestinal hemorrhage, intracranial hemorrhage	Death, DP end date, disenrollment, event, end of exposure episode, comparator drug dispensing, low-dose of current exposure, warfarin dispensing, edoxaban dispensing, apixaban dispensing, kidney transplant, dialysis, institutional stay (IS) encounter, major extracranial bleeding, gastrointestinal hemorrhage, intracranial hemorrhage
	Inclusion/Exclusion	Pre-Existing Condition	Atrial fibrillation or flutter
Include/Exclude		Include	Include
Care Setting/Primary Diagnosis		Any	Any
Lookback Period (days)		-183, 0	-183, 0
Pre-Existing Condition		Low-dose rivaroxaban, dabigatran, apixaban, edoxaban, warfarin	Low-dose rivaroxaban, dabigatran, apixaban, edoxaban, warfarin
Include/Exclude		Exclude	Exclude
Lookback Period (days)		0, 0	0, 0
Pre-Existing Condition		Institutional stay encounter	Institutional stay encounter
Include/Exclude		Exclude	Exclude
Lookback Period (days)		0, 0	0, 0
Pre-Existing Condition		Dialysis, kidney replacement, deep vein thrombosis, pulmonary embolism, joint replacement, mitral valve disease, valve replacement, valve repair	Dialysis, kidney replacement, deep vein thrombosis, pulmonary embolism, joint replacement, mitral valve disease, valve replacement, valve repair
Include/Exclude		Exclude	Exclude
Care Setting/Primary Diagnosis	Any, except ambulatory visit (AV)/other ambulatory (OA) for dialysis	Any, except AV/OA for dialysis	
Lookback Period (days)	-183, 0	-183, 0	

Appendix I.5. Specifications Defining Parameters for this Request, Comparison 9; Dabigatran vs Apixaban, Comparison 10; Rivaroxaban vs Dabigatran

Event/ Outcome	Event/Outcome	Gastrointestinal hemorrhage ¹	Intracranial Hemorrhage
	Care Setting/Primary Diagnosis	Inpatient primary (IPP)	IPP
	Washout (days)	0	0
	Blackout Period (days)	1	1
Propensity Score Matching	Covariates	See Appendix J	See Appendix J
	Matching Ratio	1:1	1:1
	Matching Caliper Settings	0.05	0.05
	Analysis Type	Conditional and unconditional	Conditional and unconditional
Subgroup Analyses	Stratifying variable	Age group	Age group
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	Sex	Sex
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	Antiplatelet drug use	Antiplatelet drug use
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	CHA ₂ DS ₂ -VAsc score (0, 1, 2, 3, 4, 5, ≥6)	CHA ₂ DS ₂ -VAsc score (0, 1, 2, 3, 4, 5, ≥6)
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	HAS-BLED score (0, 1, 2, 3, ≥4)	HAS-BLED score (0, 1, 2, 3, ≥4)
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort

¹The gastrointestinal hemorrhage outcome is defined as **a)** one code from "GI_1" tab in the primary inpatient position OR **b)** one code from "GI_2" in the primary inpatient position AND one code from "GI_1" in secondary or unspecified inpatient position on the same day

International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), Healthcare Common Procedure Coding System (HCPCS), and Current Procedural Terminology, Fourth Edition (CPT-4) codes are provided by Optum360. National Drug Codes (NDC) codes are checked against First Data Bank's "National Drug Data File (NDDF®) Plus."

Appendix I.6. Specifications Defining Parameters for this Request, Comparison 11; Rivaroxaban vs Apixaban, Comparison 12; Dabigatran vs Apixaban

This request used the Cohort Identification and Descriptive Analysis (CIDA) module, version 8.0.3 with additional programming, to investigate the comparative risk of thromboembolic stroke, intracranial hemorrhage, gastrointestinal bleeding, and extracranial bleeding outcomes among dabigatran, rivaroxaban, and apixaban users aged 64 years or younger in the Sentinel Distributed Database (SDD).

Query Period: October 19, 2010 to February 29, 2020
Coverage Requirement: Medical and drug coverage
Pre-Index Enrollment Requirement: 183 days
Enrollment Gap: 45 days
Age Groups: 21-49, 50-64 years
Envelope Macro: Off
Additional Programming Needed: Risk scores, daily dose requirement

	Comparison 11		Comparison 12	
	Exposure	Comparator	Exposure	Comparator
Medical Product	Rivaroxaban, 20 mg	Apixaban, 5 mg	Dabigatran, 150 mg	Dabigatran, 150 mg
Daily Dose Requirement	Once daily	Twice daily	Twice daily	Twice daily
Request Package Group	riv_ich	apx_ich	dab_ich	apx_ich
Incident with Respect to:	Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin (all doses)		Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin (all doses)	
Incidence Assessment	Dispensing date or days supply		Dispensing date or days supply	
Washout (days)	183		183	
Cohort Definition	First valid incident exposure episode		First valid incident exposure episode	
Stockpiling Overlapping Claims	33%		33%	
Episode Gap (days)	3		3	
Episode Extension Period (days)	3		3	
Minimum Episode Duration (days)	1		1	
Maximum Episode Duration (days)	None		None	
Minimum Days Supplied (days)	1		1	

Drug/Exposure Definition

Appendix I.6. Specifications Defining Parameters for this Request, Comparison 11; Rivaroxaban vs Apixaban, Comparison 12; Dabigatran vs Apixaban

Drug/Exposure Definition	Censor Criteria	Death, Data Partner (DP) end date, disenrollment, event, end of exposure episode, comparator drug dispensing, low-dose of current exposure, warfarin dispensing, edoxaban dispensing, apixaban dispensing, kidney transplant, dialysis, institutional stay (IS) encounter, major extracranial bleeding, gastrointestinal hemorrhage, intracranial hemorrhage	Death, DP end date, disenrollment, event, end of exposure episode, comparator drug dispensing, low-dose of current exposure, warfarin dispensing, edoxaban dispensing, apixaban dispensing, kidney transplant, dialysis, institutional stay (IS) encounter, major extracranial bleeding, gastrointestinal hemorrhage, intracranial hemorrhage
	Inclusion/Exclusion	Pre-Existing Condition	Atrial fibrillation or flutter
Include/Exclude		Include	Include
Care Setting/Primary Diagnosis		Any	Any
Lookback Period (days)		-183, 0	-183, 0
Pre-Existing Condition		Low-dose rivaroxaban, dabigatran, apixaban, edoxaban, warfarin	Low-dose rivaroxaban, dabigatran, apixaban, edoxaban, warfarin
Include/Exclude		Exclude	Exclude
Lookback Period (days)		0, 0	0, 0
Pre-Existing Condition		Institutional stay encounter	Institutional stay encounter
Include/Exclude		Exclude	Exclude
Lookback Period (days)		0, 0	0, 0
Pre-Existing Condition		Dialysis, kidney replacement, deep vein thrombosis, pulmonary embolism, joint replacement, mitral valve disease, valve replacement, valve repair	Dialysis, kidney replacement, deep vein thrombosis, pulmonary embolism, joint replacement, mitral valve disease, valve replacement, valve repair
Include/Exclude		Exclude	Exclude
Care Setting/Primary Diagnosis		Any, except ambulatory visit (AV)/other ambulatory (OA) for dialysis	Any, except AV/OA for dialysis
Lookback Period (days)		-183, 0	-183, 0

Appendix I.6. Specifications Defining Parameters for this Request, Comparison 11; Rivaroxaban vs Apixaban, Comparison 12; Dabigatran vs Apixaban

Event/ Outcome	Event/Outcome	Intracranial Hemorrhage	Intracranial Hemorrhage
	Care Setting/Primary Diagnosis	Inpatient primary (IPP)	IPP
	Washout (days)	0	0
	Blackout Period (days)	1	1
Propensity Score Matching	Covariates	See Appendix J	See Appendix J
	Matching Ratio	1:1	1:1
	Matching Caliper Settings	0.05	0.05
	Analysis Type	Conditional and unconditional	Conditional and unconditional
Subgroup Analyses	Stratifying variable	Age group	Age group
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	Sex	Sex
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	Antiplatelet drug use	Antiplatelet drug use
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	CHA ₂ DS ₂ -VAsc score (0, 1, 2, 3, 4, 5, ≥6)	CHA ₂ DS ₂ -VAsc score (0, 1, 2, 3, 4, 5, ≥6)
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort
	Stratifying variable	HAS-BLED score (0, 1, 2, 3, ≥4)	HAS-BLED score (0, 1, 2, 3, ≥4)
	Re-matching	Re-matching should be done with the matched cohort	Re-matching should be done with the matched cohort

International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), Healthcare Common Procedure Coding System (HCPCS), and Current Procedural Terminology, Fourth Edition (CPT-4) codes are provided by Optum360. National Drug Codes (NDC) codes are checked against First Data Bank's "National Drug Data File (NDDF®) Plus."

Appendix J. Baseline Covariate Groups Evaluated in this Request

Covariate	Evaluation Window	Care Setting/ Diagnosis Position
Age in years (continuous)	Index date	-
Age Group (years)¹		
21-49	Index date	-
50-64	Index date	-
Sex		
Female	Index date	-
Male	Index date	-
Race		
American Indian or Alaska Native	Index date	-
Asian	Index date	-
Black or African American	Index date	-
Native Hawaiian or Other Pacific Islander	Index date	-
White	Index date	-
Unknown	Index date	-
Ethnicity		
Hispanic Origin	Index date	-
Year¹		
2010	Index date	-
2011	Index date	-
2012	Index date	-
2013	Index date	-
2014	Index date	-
2015	Index date	-
2016	Index date	-
2017	Index date	-
2018	Index date	-
2019	Index date	-
2020	Index date	-
Medical Comorbidities		
Diabetes	-183, 0	Any
Hypercholesterolemia	-183, 0	Any
Hypertension	-183, 0	Any
Chronic kidney failure	-183, 0	Any
Acute kidney failure	-183, 0	Any
Obesity	-183, 0	Any
Peptic ulcer disease	-183, 0	Any
Nicotine dependency	-183, 0	Any
Hospitalized acute myocardial infarction (AMI)	-30, 0	Inpatient primary (IPP) or secondary (IPS)
Hospitalized AMI	-183, -31	IPP or IPS
Coronary revascularization	-183, 0	Any
Hospitalized heart failure	-183, 0	Inpatient (IP) or Emergency Department (ED)
Outpatient heart failure	-183, 0	Ambulatory visit (AV) or other ambulatory
Other ischemic heart disease	-183, 0	Any
Hospitalized stroke	-30, 0	IPP
Hospitalized stroke	-183, -31	IPP
Transient ischemic attack	-183, 0	Any
Other medical conditions (falls, fractures, syncope, walker use)	-183, 0	Any
Cardioversion	-183, 0	Any
Cardioablation	-183, 0	Any
Hospitalized for bleeding	-183, 0	IPP

Appendix J. Baseline Covariate Groups Evaluated in this Request

Covariate	Evaluation Window	Care Setting/ Diagnosis Position
Medication Use		
Estrogen replacement	-183, 0	-
H2-antagonist	-183, 0	-
Nonsteroidal anti-inflammatory drugs	-183, 0	-
Proton pump inhibitors	-183, 0	-
Selective serotonin reuptake inhibitor antidepressants	-183, 0	-
Insulin	-183, 0	-
Metformin (Biguanide)	-183, 0	-
Sulfonylureas	-183, 0	-
Other Diabetes Medications	-183, 0	-
Angiotensin converting enzyme inhibitors/angiotensin receptor blockers	-183, 0	-
Antiarrhythmics	-183, 0	-
Anti-coagulant (injectable)	-183, 0	-
Anti-platelets	-183, 0	-
Beta-blockers	-183, 0	-
Calcium channel blockers	-183, 0	-
Digoxin	-183, 0	-
Loop diuretics	-183, 0	-
Potassium sparing diuretics	-183, 0	-
Thiazide diuretics	-183, 0	-
Nitrates	-183, 0	-
Statins	-183, 0	-
Fibrates	-183, 0	-
Amiodarone	-183, 0	-
Dronedarone	-183, 0	-
CHA₂DS₂-VASc Score		
CHA ₂ DS ₂ -VASc score (continuous) ¹	-183, 0	-
CHA ₂ DS ₂ -VASc score (categorical)		
0	-183, 0	-
1	-183, 0	-
2	-183, 0	-
3	-183, 0	-
4	-183, 0	-
5	-183, 0	-
≥6	-183, 0	-

Appendix J. Baseline Covariate Groups Evaluated in this Request

Covariate	Evaluation Window	Care Setting/ Diagnosis Position
HAS-BLED Score		
HAS-BLED score (continuous) ¹	-183, 0	
HAS-BLED score (categorical)		
0	-183, 0	-
1	-183, 0	-
2	-183, 0	-
3	-183, 0	-
≥4	-183, 0	-
Health care utilization		
Number of inpatient hospital stays	-183, 0	IP
Number of ambulatory visits	-183, 0	AV
Number of emergency room encounters		
0 visit	-30, 0	ED
At least 1 visit	-30, 0	ED
2+ visits	-30, 0	ED
Number of emergency room encounters		
0 visit	-183, -31	ED
At least 1 visit	-183, -31	ED
2+ visits	-183, -31	ED
Number of unique generics dispensed	-183, 0	-

¹Variables are displayed in Table 1, but are not included in the propensity score models