

Disclaimer

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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_mpl1r_wp226

Request ID: cder_mpl1r_wp226_grp1_v01 and cder_mpl1r_wp226_grp2_v01

Request Description: This analysis is a part of the ongoing effort to monitor the utilization of outpatient COVID-19 treatment under emergency use authorization (EUA). In this report we estimated the rates of outpatient COVID-19 treatment utilization and assessed the baseline characteristics of outpatient COVID-19 treatment users in the Sentinel Distributed Database (SDD) and the Rapid COVID SDD.

Sentinel Routine Querying Module: Cohort Identification and Descriptive Analysis (CIDA) module, version 11.3.0

Data Source: We distributed one request to three Data Partners on July 1, 2022. These three Data Partners are a subset of the Rapid COVID SDD and include Data Partners with care setting information for laboratory data. We distributed a second request to two Data Partners without care setting information for laboratory data. One of the two Data Partners is a subset of the SDD, while the other is a subset of the Rapid COVID SDD. The study period included data from December 22, 2021 up to April 30, 2022. Please see Appendix A for a list of dates of available data for each Data Partner.

Study Design: We identified individuals with use of outpatient COVID-19 treatment, including Paxlovid (nirmatrelvir/ritonavir), a co-packaged oral drug product consisting of nirmatrelvir and ritonavir, sotrovimab, bebtelovimab, molnupiravir, outpatient remdesivir, bamlanivimab, casirivimab and imdevimab, and bamlanivimab and etesevimab. We further stratified results by age group, Health and Human Services (HHS) region, and year-month. Please see Appendix B for a list of states and territories included in each HHS region. This is a Type 1 analysis in the Query Request Package (QRP) documentation.

Exposures/Events of Interest: The exposures of interest were: 1) nirmatrelvir/ritonavir, 2) sotrovimab, 3) bebtelovimab, 4) molnupiravir, 5) remdesivir, 6) casirivimab and imdevimab, and 7) bamlanivimab and etesevimab. We identified COVID-19 treatment using Healthcare Common Procedure Coding System (HCPCS), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) procedure codes, and National Drug Codes (NDCs). For outpatient exposure to remdesivir, we identified treatment using HCPCS and ICD-10-PCS codes, outpatient dispensing data, and NDCs in the Procedure and Dispensing Sentinel Common Data Model (SCDM) tables, in either the ambulatory (AV), other ambulatory (OA), or emergency department (ED) care settings. As casirivimab and imdevimab are not authorized currently to be used as individual products, we treated evidence of either one of those drugs as joint casirivimab and imdevimab exposure. For bamlanivimab and etesevimab, we required evidence of both drugs on the same day to count as joint bamlanivimab and etesevimab exposure. Please see Appendix C for a list of procedure codes and Appendix D for a list of generic and brand names of medical products used to define exposures in this request. Only the first qualifying (index) COVID-19 treatment exposure qualified for the cohort; cohort re-entry was not allowed.

Cohort Eligibility Criteria: We required members to be continuously enrolled in health plans for at least 183 days prior to their index exposure. Patients in the nirmatrelvir/ritonavir and molnupiravir cohorts were required to have medical and drug coverage, while the other cohorts were only required to have medical coverage. A gap in enrollment of up to 45 days was allowed and treated as continuous enrollment. The following age groups were defined: 0-11, 12-17, 18-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75-84, and 85+ years.

Overview for Request: cder_mpl1r_wp226

Baseline Characteristics: We assessed the following characteristics in the 183 days prior to and including the index date: inpatient, outpatient, or emergency department encounter, COVID-19 positive lab, COVID-19 diagnosis, obesity, pregnancy, chronic kidney disease, diabetes, immunosuppressant disease or treatment, cardiovascular disease (including congenital heart disease (CHD)), interstitial lung disease, chronic obstructive pulmonary disease (COPD), pulmonary hypertension or pulmonary embolism, dementia, sickle cell disease, bronchiectasis, cancer, cerebrovascular disease, congenital heart disease, chronic liver disease (cirrhosis, non-alcoholic fatty liver disease, alcoholic liver disease, autoimmune hepatitis), cystic fibrosis, human immunodeficiency virus (HIV), mental health conditions (such as mood disorders, including depression, and schizophrenia spectrum disorders), smoking, current and former, solid organ or blood stem cell transplantation, tuberculosis, overweight, substance use disorders, thalassemia, alpha 1 antitrypsin deficiency, reactive airway and other respiratory diseases, asthma, hepatitis B, hepatitis C, and hypertension. Age, year, sex, race, and ethnicity were assessed on the index date. We assessed the exposure to potent and non-potent Cytochrome P450, family 3, subfamily A (CYP3A) inducers, drugs dependent on CYP3A for clearance, and other CYP3A drug-drug interactors, all in the 90, 30, and seven days prior to index. We also assessed use of any of the index COVID-19 treatment in the two weeks prior, 15 to 30 days prior, two weeks after, and 15 to 30 days after the index exposure.

Please see Appendix E for a list of ICD-10-CM diagnosis codes, ICD-10-PCS, HCPCS, CPT-4, and Logical Observation Identifiers Names and Codes (LOINC) laboratory codes and Appendix F for a list of generic names of medical products used to define the baseline characteristics in this request.

Please see Appendices G-I for the specifications defining parameters used in this request.

Limitations: Algorithms used to define exposures, inclusion criteria, and baseline characteristics use codes in healthcare administrative data as proxies for events; thus, misclassification is possible.

Claims might not be complete for the overall study population by the time the analysis was done. Data completeness varies by data source and claims type (i.e. care setting: inpatient or outpatient); we expect inpatient claims may not be complete for ≥ 60 days after the encounters (i.e., ≥ 60 days for the two participating national health plans, ≥ 30 days for the two participating integrated delivery systems). Therefore, estimates utilizing inpatient claims (e.g., covariates, or events) may be underestimated. Data should be interpreted with these limitations in mind.

Comorbidities can be under-captured as health care utilization for non-urgent medical conditions may reduce during the pandemic.

Notes: Please contact the Sentinel Operations Center (info@sentinel-system.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.sentinel-system.org/projects/SENTINEL/repos/sentinel-routine-querying-tool-documentation/browse>).

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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

Table 1a. Aggregated Characteristics of Nirmatrelvir/Ritonavir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| | | Nirmatrelvir/Ritonavir | |
|---|--|------------------------|--------------------|
| Patient Characteristics | | Number | |
| Unique patients | | 2,307 | |
| Demographic Characteristics | | Mean | Standard Deviation |
| Mean Age (Years) | | 70.3 | 11.5 |
| Age (Years) | | Number | Percent |
| 0-11 | | 0 | 0.0% |
| 12-17 | | 1 | 0.0% |
| 18-24 | | 5 | 0.2% |
| 25-34 | | 20 | 0.9% |
| 35-44 | | 59 | 2.6% |
| 45-54 | | 141 | 6.1% |
| 55-64 | | 317 | 13.7% |
| 65-74 | | 970 | 42.0% |
| 75-84 | | 613 | 26.6% |
| ≥ 85 | | 181 | 7.8% |
| Sex | | | |
| Female | | 1,328 | 57.6% |
| Male | | 979 | 42.4% |
| Race ¹ | | | |
| American Indian or Alaska Native | | 8 | 0.3% |
| Asian | | 41 | 1.8% |
| Black or African American | | 142 | 6.2% |
| Native Hawaiian or Other Pacific Islander | | 28 | 1.2% |
| Unknown | | 380 | 16.5% |
| White | | 1,708 | 74.0% |
| Hispanic origin | | | |
| Yes | | 52 | 2.3% |
| No | | 1,925 | 83.4% |
| Unknown | | 330 | 14.3% |
| Year | | | |
| 2021 | | 14 | 0.6% |
| 2022 | | 2,293 | 99.4% |
| Care Setting ² | | | |
| Outpatient Encounter | | 1,087 | 47.1% |
| Inpatient Encounter | | 3 | 0.1% |
| Emergency Department Encounter | | 108 | 4.7% |
| History of COVID-19 Diagnosis in Any Care Setting: | | | |
| COVID-19 diagnosis only on or anytime prior to index date | | 1,383 | 59.9% |
| No COVID-19 diagnosis on or anytime prior to index date | | 873 | 37.8% |
| COVID-19 on the same day as index date | | 925 | 40.1% |
| COVID-19 1-2 day prior to index date | | 427 | 18.5% |

Table 1a. Aggregated Characteristics of Nirmatrelvir/Ritonavir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| COVID-19 3-5 day prior to index date | 77 | 3.3% |
| COVID-19 6-7 days prior to index date | 19 | 0.8% |
| COVID-19 8-14 days prior to index date | 26 | 1.1% |
| COVID-19 15-30 days prior to index date | 18 | 0.8% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| | Number | Percent |
| COVID-19 > 30 days prior to index date | 179 | 7.8% |
| COVID-19 within 7 days after index date | 323 | 14.0% |
| COVID-19 8-14 days after index date | 151 | 6.5% |
| COVID-19 >14 days after index date | 132 | 5.7% |
| History of COVID-19 Diagnosis in the Inpatient Care Setting: | | |
| COVID-19 on the same day as index date | 7 | 0.3% |
| COVID-19 1-2 day prior to index date | 9 | 0.4% |
| COVID-19 3-5 day prior to index date | 2 | 0.1% |
| COVID-19 6-7 days prior to index date | 2 | 0.1% |
| COVID-19 8-14 days prior to index date | 5 | 0.2% |
| COVID-19 15-30 days prior to index date | 0 | 0.0% |
| COVID-19 > 30 days prior to index date | 34 | 1.5% |
| COVID-19 within 7 days after index date | 38 | 1.6% |
| COVID-19 8-14 days after index date | 19 | 0.8% |
| COVID-19 >14 days after index date | 19 | 0.8% |
| History of COVID-19 Diagnosis in the Outpatient Care Setting: | | |
| COVID-19 on the same day as index date | 917 | 39.7% |
| COVID-19 1-2 day prior to index date | 425 | 18.4% |
| COVID-19 3-5 day prior to index date | 77 | 3.3% |
| COVID-19 6-7 days prior to index date | 17 | 0.7% |
| COVID-19 8-14 days prior to index date | 21 | 0.9% |
| COVID-19 15-30 days prior to index date | 18 | 0.8% |
| COVID-19 > 30 days prior to index date | 162 | 7.0% |
| COVID-19 within 7 days after index date | 312 | 13.5% |
| COVID-19 8-14 days after index date | 138 | 6.0% |
| COVID-19 >14 days after index date | 122 | 5.3% |
| History of COVID-19 Diagnosis in the Five Days Prior: | | |
| COVID-19 diagnosis only within five-day EUA timeframe in any care setting | 1,283 | 55.6% |
| No COVID-19 diagnosis within five-day EUA timeframe in any care setting | 973 | 42.2% |
| Users with any outpatient visit within five-day EUA timeframe | 1,704 | 73.9% |
| Users with only non-ED outpatient visits within five-day EUA timeframe | 1,463 | 63.4% |
| Users with only ED visits within five-day EUA timeframe | 96 | 4.2% |
| History of COVID-19 Diagnosis in the Seven Days Prior: | | |
| COVID-19 diagnosis only within seven-day EUA timeframe in any care setting | 1,295 | 56.1% |
| No COVID-19 diagnosis within seven-day EUA timeframe in any care setting | 961 | 41.7% |
| Users with any outpatient visit within seven-day EUA timeframe | 1,757 | 76.2% |
| Users with only non-ED outpatient visits within seven-day EUA timeframe | 1,508 | 65.4% |

Table 1a. Aggregated Characteristics of Nirmatrelvir/Ritonavir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| Users with only ED visits within seven-day EUA timeframe | 86 | 3.7% |
| History of High Risk Conditions in the Prior Six Months: | | |
| High Risk criteria with conclusive evidence | 2,002 | 86.8% |
| High Risk criteria with suggestive evidence | 326 | 14.1% |
| High Risk criteria with mixed evidence | 1,569 | 68.0% |
| Obesity | 826 | 35.8% |
| Pregnancy | 0 | 0.0% |
| Chronic Kidney Disease | 458 | 19.9% |
| History of High Risk Conditions in the Prior Six Months: | | |
| | Number | Percent |
| Diabetes | 692 | 30.0% |
| Immunosuppressant Disease or Treatment | 1,228 | 53.2% |
| Cardiovascular (including Congenital Heart Disease) | 781 | 33.9% |
| Interstitial lung disease | 56 | 2.4% |
| Chronic Obstructive Pulmonary Disease (COPD) | 350 | 15.2% |
| Pulmonary Hypertension or Pulmonary Embolism | 22 | 1.0% |
| Dementia | 114 | 4.9% |
| Sickle Cell Disease | 1 | 0.0% |
| Bronchiectasis | 21 | 0.9% |
| Cancer | 301 | 13.0% |
| Cerebrovascular disease | 101 | 4.4% |
| Chronic liver disease | 129 | 5.6% |
| Cystic fibrosis | 9 | 0.4% |
| Human Immunodeficiency Virus (HIV) | 9 | 0.4% |
| Mental health conditions | 458 | 19.9% |
| Smoking current and former | 453 | 19.6% |
| Solid organ or blood stem cell transplantation | 1 | 0.0% |
| Tuberculosis | 2 | 0.1% |
| Congenital heart disease | 10 | 0.4% |
| Overweight | 268 | 11.6% |
| Substance use disorders | 61 | 2.6% |
| Thalassemia | 2 | 0.1% |
| Alpha 1 antitrypsin deficiency | 2 | 0.1% |
| Reactive airway and other respiratory diseases | 3 | 0.1% |
| Asthma | 220 | 9.5% |
| Hepatitis B | 3 | 0.1% |
| Hepatitis C | 9 | 0.4% |
| Hypertension | 1,500 | 65.0% |
| Recorded Use of Potent Cytochrome P450 3A4 (CYP3A) Drugs: | | |
| Potent CYP3A Inducers* in the prior three months | 0 | 0.0% |
| Potent CYP3A Inducers* in the prior month | 0 | 0.0% |
| Concomitant Potent CYP3A Inducers* | 0 | 0.0% |

Table 1a. Aggregated Characteristics of Nirmatrelvir/Ritonavir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| Recorded Use of Other CYP3A Inducers: | | |
|--|---------------|----------------|
| Other CYP3A Inducers** in the prior three months | 847 | 36.7% |
| Other CYP3A Inducers** in the prior month | 468 | 20.3% |
| Concomitant Other CYP3A Inducers** | 692 | 30.0% |
| Recorded Use of Drugs Dependent on CYP3A for Clearance: | | |
| Drugs dependent on CYP3A for clearance*** in the prior three months | 221 | 9.6% |
| Drugs dependent on CYP3A for clearance*** in the prior month | 84 | 3.6% |
| Concomitant Drugs dependent on CYP3A for clearance*** | 213 | 9.2% |
| Recorded Use of Other Nirmatrelvir/Ritonavir Drug/Drug Interactors: | | |
| Other drug-drug interactors**** in the prior three months | 1,295 | 56.1% |
| Other drug-drug interactors**** in the prior month | 664 | 28.8% |
| Concomitant Other drug-drug interactors**** | 1,282 | 55.6% |
| Prior Use of Emergency Use Authorization (EUA) Agents: | | |
| | Number | Percent |
| Nirmatrelvir/Ritonavir in the two weeks prior | 0 | 0.0% |
| Sotrovimab in the two weeks prior | 2 | 0.1% |
| Bebtelovimab in the two weeks prior | 0 | 0.0% |
| Molnupiravir in the two weeks prior | 3 | 0.1% |
| Remdesivir in the two weeks prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks prior | 1 | 0.0% |
| Casirivimab and Imdevimab in the two weeks prior | 1 | 0.0% |
| Nirmatrelvir/Ritonavir 15 to 30 days prior | 0 | 0.0% |
| Sotrovimab 15 to 30 days prior | 2 | 0.1% |
| Bebtelovimab 15 to 30 days prior | 0 | 0.0% |
| Molnupiravir 15 to 30 days prior | 0 | 0.0% |
| Remdesivir 15 to 30 days prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days prior | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days prior | 0 | 0.0% |

Table 1a. Aggregated Characteristics of Nirmatrelvir/Ritonavir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| Post-Index Use of EUA Agents: | | |
|--|----|------|
| Nirmatrelvir/Ritonavir in the two weeks after index | 7 | 0.3% |
| Sotrovimab in the two weeks after index | 18 | 0.8% |
| Bebtelovimab in the two weeks after index | 0 | 0.0% |
| Molnupiravir in the two weeks after index | 3 | 0.1% |
| Remdesivir in the two weeks after index | 0 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks after index | 4 | 0.2% |
| Casirivimab and Imdevimab in the two weeks after index | 7 | 0.3% |
| Nirmatrelvir/Ritonavir 15 to 30 days after index | 0 | 0.0% |
| Sotrovimab 15 to 30 days after index | 0 | 0.0% |
| Bebtelovimab 15 to 30 days after index | 0 | 0.0% |
| Molnupiravir 15 to 30 days after index | 0 | 0.0% |
| Remdesivir 15 to 30 days after index | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days after index | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days after index | 0 | 0.0% |

¹Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

²The Sentinel Common Data Model does not require outpatient dispensings to have a corresponding record in the Encounter table, therefore patient counts by encounter care setting may not sum to the total number of patients in the cohort.

*Potent CYP3A Inducers: apalutamide, carbamazepine, phenobarbital, phenytoin, rifampin, and St. John's wart.

**Other CYP3A inducers: efavirenz, nevirapine, rifabutin, betamethasone, budesonide, ciclesonide, dexamethasone, fluticasone, methylprednisolone, mometasone, prednisone, and triamcinolone.

***Drugs dependent on CYP3A for clearance: alfuzosin, pethidine, propoxyphene, ranolazine, amiodarone, dronedarone, flecainide, propafenone, quinidine, colchicine, lurasidone, pimozide, clozapine, dihydroergotamine, ergotamine, methylergonovine, lovastatin, simvastatin, sildenafil, triazolam, and oral midazolam.

****Other Drug/Drug Interactors: All other drugs in Table 1 of FDA's December 22, 2021 fact sheet.

Table 1b. Aggregated Characteristics of Sotrovimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| Sotrovimab | | |
|---|---------------|---------------------------|
| Patient Characteristics | Number | |
| Unique patients | 5,993 | |
| Demographic Characteristics | Mean | Standard Deviation |
| Mean Age (Years) | 71.2 | 11.8 |
| | Number | Percent |
| Age (Years) | | |
| 0-11 | 0 | 0.0% |
| 12-17 | 3 | 0.1% |
| 18-24 | 15 | 0.3% |
| 25-34 | 64 | 1.1% |
| 35-44 | 146 | 2.4% |
| 45-54 | 313 | 5.2% |
| 55-64 | 780 | 13.0% |
| 65-74 | 2,322 | 38.7% |
| 75-84 | 1,784 | 29.8% |
| ≥ 85 | 566 | 9.4% |
| Sex | | |
| Female | 3,385 | 56.5% |
| Male | 2,608 | 43.5% |
| Race ¹ | | |
| American Indian or Alaska Native | 43 | 0.7% |
| Asian | 38 | 0.6% |
| Black or African American | 418 | 7.0% |
| Native Hawaiian or Other Pacific Islander | 59 | 1.0% |
| Unknown | 875 | 14.6% |
| White | 4,560 | 76.1% |
| Hispanic origin | | |
| Yes | 60 | 1.0% |
| No | 5,117 | 85.4% |
| Unknown | 816 | 13.6% |
| Year | | |
| 2021 | 40 | 0.7% |
| 2022 | 5,953 | 99.3% |
| Care Setting² | | |
| Outpatient Encounter | 5,990 | 99.9% |
| Inpatient Encounter | 23 | 0.4% |
| Emergency Department Encounter | 1,052 | 17.6% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| COVID-19 diagnosis only on or anytime prior to index date | 5,964 | 99.5% |
| No COVID-19 diagnosis on or anytime prior to index date | 29 | 0.5% |
| COVID-19 on the same day as index date | 5,925 | 98.9% |
| COVID-19 1-2 day prior to index date | 2,030 | 33.9% |

Table 1b. Aggregated Characteristics of Sotrovimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| COVID-19 3-5 day prior to index date | 1,146 | 19.1% |
| COVID-19 6-7 days prior to index date | 259 | 4.3% |
| COVID-19 8-14 days prior to index date | 125 | 2.1% |
| COVID-19 15-30 days prior to index date | 51 | 0.9% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| | Number | Percent |
| COVID-19 > 30 days prior to index date | 503 | 8.4% |
| COVID-19 within 7 days after index date | 985 | 16.4% |
| COVID-19 8-14 days after index date | 515 | 8.6% |
| COVID-19 >14 days after index date | 503 | 8.4% |
| History of COVID-19 Diagnosis in the Inpatient Care Setting: | | |
| COVID-19 on the same day as index date | 57 | 1.0% |
| COVID-19 1-2 day prior to index date | 12 | 0.2% |
| COVID-19 3-5 day prior to index date | 23 | 0.4% |
| COVID-19 6-7 days prior to index date | 4 | 0.1% |
| COVID-19 8-14 days prior to index date | 7 | 0.1% |
| COVID-19 15-30 days prior to index date | 10 | 0.2% |
| COVID-19 > 30 days prior to index date | 114 | 1.9% |
| COVID-19 within 7 days after index date | 106 | 1.8% |
| COVID-19 8-14 days after index date | 79 | 1.3% |
| COVID-19 >14 days after index date | 50 | 0.8% |
| History of COVID-19 Diagnosis in the Outpatient Care Setting: | | |
| COVID-19 on the same day as index date | 5,885 | 98.2% |
| COVID-19 1-2 day prior to index date | 2,025 | 33.8% |
| COVID-19 3-5 day prior to index date | 1,137 | 19.0% |
| COVID-19 6-7 days prior to index date | 255 | 4.3% |
| COVID-19 8-14 days prior to index date | 120 | 2.0% |
| COVID-19 15-30 days prior to index date | 41 | 0.7% |
| COVID-19 > 30 days prior to index date | 488 | 8.1% |
| COVID-19 within 7 days after index date | 958 | 16.0% |
| COVID-19 8-14 days after index date | 469 | 7.8% |
| COVID-19 >14 days after index date | 479 | 8.0% |
| History of COVID-19 Diagnosis in the Five Days Prior: | | |
| COVID-19 diagnosis only within five-day EUA timeframe in any care setting | 5,955 | 99.4% |
| No COVID-19 diagnosis within five-day EUA timeframe in any care setting | 38 | 0.6% |
| Users with any outpatient visit within five-day EUA timeframe | 5,991 | 100.0% |
| Users with only non-ED outpatient visits within five-day EUA timeframe | 4,349 | 72.6% |
| Users with only ED visits within five-day EUA timeframe | 315 | 5.3% |
| History of COVID-19 Diagnosis in the Seven Days Prior: | | |
| COVID-19 diagnosis only within seven-day EUA timeframe in any care setting | 5,957 | 99.4% |
| No COVID-19 diagnosis within seven-day EUA timeframe in any care setting | 36 | 0.6% |
| Users with any outpatient visit within seven-day EUA timeframe | 5,992 | 100.0% |
| Users with only non-ED outpatient visits within seven-day EUA timeframe | 4,288 | 71.6% |

Table 1b. Aggregated Characteristics of Sotrovimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| Users with only ED visits within seven-day EUA timeframe | 291 | 4.9% |
| History of High Risk Conditions in the Prior Six Months: | | |
| High Risk criteria with conclusive evidence | 5,554 | 92.7% |
| High Risk criteria with suggestive evidence | 889 | 14.8% |
| High Risk criteria with mixed evidence | 4,612 | 77.0% |
| Obesity | 2,428 | 40.5% |
| Pregnancy | 17 | 0.3% |
| Chronic Kidney Disease | 1,650 | 27.5% |
| History of High Risk Conditions in the Prior Six Months: | | |
| | Number | Percent |
| Diabetes | 2,323 | 38.8% |
| Immunosuppressant Disease or Treatment | 3,758 | 62.7% |
| Cardiovascular (including Congenital Heart Disease) | 2,861 | 47.7% |
| Interstitial lung disease | 214 | 3.6% |
| Chronic Obstructive Pulmonary Disease (COPD) | 1,231 | 20.5% |
| Pulmonary Hypertension or Pulmonary Embolism | 104 | 1.7% |
| Dementia | 278 | 4.6% |
| Sickle Cell Disease | 10 | 0.2% |
| Bronchiectasis | 78 | 1.3% |
| Cancer | 958 | 16.0% |
| Cerebrovascular disease | 369 | 6.2% |
| Chronic liver disease | 456 | 7.6% |
| Cystic fibrosis | 27 | 0.5% |
| Human Immunodeficiency Virus (HIV) | 20 | 0.3% |
| Mental health conditions | 1,366 | 22.8% |
| Smoking current and former | 1,838 | 30.7% |
| Solid organ or blood stem cell transplantation | 14 | 0.2% |
| Tuberculosis | 1 | 0.0% |
| Congenital heart disease | 77 | 1.3% |
| Overweight | 688 | 11.5% |
| Substance use disorders | 210 | 3.5% |
| Thalassemia | 9 | 0.2% |
| Alpha 1 antitrypsin deficiency | 7 | 0.1% |
| Reactive airway and other respiratory diseases | 7 | 0.1% |
| Asthma | 687 | 11.5% |
| Hepatitis B | 11 | 0.2% |
| Hepatitis C | 48 | 0.8% |
| Hypertension | 4,452 | 74.3% |
| Recorded Use of Potent Cytochrome P450 3A4 (CYP3A) Drugs: | | |
| Potent CYP3A Inducers* in the prior three months | 9 | 0.2% |
| Potent CYP3A Inducers* in the prior month | 5 | 0.1% |
| Concomitant Potent CYP3A Inducers* | 7 | 0.1% |

Table 1b. Aggregated Characteristics of Sotrovimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| Recorded Use of Other CYP3A Inducers: | | |
|--|---------------|----------------|
| Other CYP3A Inducers** in the prior three months | 2,631 | 43.9% |
| Other CYP3A Inducers** in the prior month | 1,769 | 29.5% |
| Concomitant Other CYP3A Inducers** | 2,063 | 34.4% |
| Recorded Use of Drugs Dependent on CYP3A for Clearance: | | |
| Drugs dependent on CYP3A for clearance*** in the prior three months | 812 | 13.5% |
| Drugs dependent on CYP3A for clearance*** in the prior month | 352 | 5.9% |
| Concomitant Drugs dependent on CYP3A for clearance*** | 784 | 13.1% |
| Recorded Use of Other Nirmatrelvir/Ritonavir Drug/Drug Interactors: | | |
| Other drug-drug interactors**** in the prior three months | 3,474 | 58.0% |
| Other drug-drug interactors**** in the prior month | 1,897 | 31.7% |
| Concomitant Other drug-drug interactors**** | 3,417 | 57.0% |
| Prior Use of Emergency Use Authorization (EUA) Agents: | | |
| | Number | Percent |
| Nirmatrelvir/Ritonavir in the two weeks prior | 18 | 0.3% |
| Sotrovimab in the two weeks prior | 0 | 0.0% |
| Bebtelovimab in the two weeks prior | 0 | 0.0% |
| Molnupiravir in the two weeks prior | 28 | 0.5% |
| Remdesivir in the two weeks prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks prior | 2 | 0.0% |
| Casirivimab and Imdevimab in the two weeks prior | 0 | 0.0% |
| Nirmatrelvir/Ritonavir 15 to 30 days prior | 0 | 0.0% |
| Sotrovimab 15 to 30 days prior | 0 | 0.0% |
| Bebtelovimab 15 to 30 days prior | 0 | 0.0% |
| Molnupiravir 15 to 30 days prior | 0 | 0.0% |
| Remdesivir 15 to 30 days prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days prior | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days prior | 0 | 0.0% |

Table 1b. Aggregated Characteristics of Sotrovimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| Post-Index Use of EUA Agents: | | |
|--|---|------|
| Nirmatrelvir/Ritonavir in the two weeks after index | 2 | 0.0% |
| Sotrovimab in the two weeks after index | 7 | 0.1% |
| Bebtelovimab in the two weeks after index | 0 | 0.0% |
| Molnupiravir in the two weeks after index | 2 | 0.0% |
| Remdesivir in the two weeks after index | 0 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks after index | 0 | 0.0% |
| Casirivimab and Imdevimab in the two weeks after index | 0 | 0.0% |
| Nirmatrelvir/Ritonavir 15 to 30 days after index | 2 | 0.0% |
| Sotrovimab 15 to 30 days after index | 0 | 0.0% |
| Bebtelovimab 15 to 30 days after index | 0 | 0.0% |
| Molnupiravir 15 to 30 days after index | 0 | 0.0% |
| Remdesivir 15 to 30 days after index | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days after index | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days after index | 0 | 0.0% |

¹Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

²The Sentinel Common Data Model does not require outpatient dispensings to have a corresponding record in the Encounter table, therefore patient counts by encounter care setting may not sum to the total number of patients in the cohort.

*Potent CYP3A Inducers: apalutamide, carbamazepine, phenobarbital, phenytoin, rifampin, and St. John's wart.

**Other CYP3A inducers: efavirenz, nevirapine, rifabutin, betamethasone, budesonide, ciclesonide, dexamethasone, fluticasone, methylprednisolone, mometasone, prednisone, and triamcinolone.

***Drugs dependent on CYP3A for clearance: alfuzosin, pethidine, propoxyphene, ranolazine, amiodarone, dronedarone, flecainide, propafenone, quinidine, colchicine, lurasidone, pimozide, clozapine, dihydroergotamine, ergotamine, methylergonovine, lovastatin, simvastatin, sildenafil, triazolam, and oral midazolam.

****Other Drug/Drug Interactors: All other drugs in Table 1 of FDA's December 22, 2021 fact sheet.

Table 1c. Aggregated Characteristics of Bebtelovimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| Bebtelovimab | | |
|---|--------|--------------------|
| Patient Characteristics | Number | |
| Unique patients | 17 | |
| Demographic Characteristics | Mean | Standard Deviation |
| Mean Age (Years) | 62.2 | 16.8 |
| Age (Years) | | |
| Number | | |
| Percent | | |
| 0-11 | 0 | 0.0% |
| 12-17 | 0 | 0.0% |
| 18-24 | 0 | 0.0% |
| 25-34 | 0 | 0.0% |
| 35-44 | 4 | 23.5% |
| 45-54 | 2 | 11.8% |
| 55-64 | 0 | 0.0% |
| 65-74 | 7 | 41.2% |
| 75-84 | 3 | 17.6% |
| ≥ 85 | 1 | 5.9% |
| Sex | | |
| Female | 7 | 41.2% |
| Male | 10 | 58.8% |
| Race ¹ | | |
| American Indian or Alaska Native | 0 | 0.0% |
| Asian | 0 | 0.0% |
| Black or African American | 0 | 0.0% |
| Native Hawaiian or Other Pacific Islander | 0 | 0.0% |
| Unknown | 7 | 41.2% |
| White | 10 | 58.8% |
| Hispanic origin | | |
| Yes | 2 | 11.8% |
| No | 10 | 58.8% |
| Unknown | 5 | 29.4% |
| Year | | |
| 2021 | 0 | 0.0% |
| 2022 | 17 | 100.0% |
| Care Setting ² | | |
| Outpatient Encounter | 17 | 100.0% |
| Inpatient Encounter | 0 | 0.0% |
| Emergency Department Encounter | 1 | 5.9% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| COVID-19 diagnosis only on or anytime prior to index date | 17 | 100.0% |
| No COVID-19 diagnosis on or anytime prior to index date | 0 | 0.0% |
| COVID-19 on the same day as index date | 17 | 100.0% |
| COVID-19 1-2 day prior to index date | 4 | 23.5% |

Table 1c. Aggregated Characteristics of Bebtelovimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| COVID-19 3-5 day prior to index date | 0 | 0.0% |
| COVID-19 6-7 days prior to index date | 1 | 5.9% |
| COVID-19 8-14 days prior to index date | 0 | 0.0% |
| COVID-19 15-30 days prior to index date | 1 | 5.9% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| | Number | Percent |
| COVID-19 > 30 days prior to index date | 1 | 5.9% |
| COVID-19 within 7 days after index date | 1 | 5.9% |
| COVID-19 8-14 days after index date | 0 | 0.0% |
| COVID-19 >14 days after index date | 0 | 0.0% |
| History of COVID-19 Diagnosis in the Inpatient Care Setting: | | |
| COVID-19 on the same day as index date | 0 | 0.0% |
| COVID-19 1-2 day prior to index date | 0 | 0.0% |
| COVID-19 3-5 day prior to index date | 0 | 0.0% |
| COVID-19 6-7 days prior to index date | 0 | 0.0% |
| COVID-19 8-14 days prior to index date | 0 | 0.0% |
| COVID-19 15-30 days prior to index date | 0 | 0.0% |
| COVID-19 > 30 days prior to index date | 0 | 0.0% |
| COVID-19 within 7 days after index date | 0 | 0.0% |
| COVID-19 8-14 days after index date | 0 | 0.0% |
| COVID-19 >14 days after index date | 0 | 0.0% |
| History of COVID-19 Diagnosis in the Outpatient Care Setting: | | |
| COVID-19 on the same day as index date | 17 | 100.0% |
| COVID-19 1-2 day prior to index date | 4 | 23.5% |
| COVID-19 3-5 day prior to index date | 0 | 0.0% |
| COVID-19 6-7 days prior to index date | 1 | 5.9% |
| COVID-19 8-14 days prior to index date | 0 | 0.0% |
| COVID-19 15-30 days prior to index date | 1 | 5.9% |
| COVID-19 > 30 days prior to index date | 1 | 5.9% |
| COVID-19 within 7 days after index date | 1 | 5.9% |
| COVID-19 8-14 days after index date | 0 | 0.0% |
| COVID-19 >14 days after index date | 0 | 0.0% |
| History of COVID-19 Diagnosis in the Five Days Prior: | | |
| COVID-19 diagnosis only within five-day EUA timeframe in any care setting | 17 | 100.0% |
| No COVID-19 diagnosis within five-day EUA timeframe in any care setting | 0 | 0.0% |
| Users with any outpatient visit within five-day EUA timeframe | 17 | 100.0% |
| Users with only non-ED outpatient visits within five-day EUA timeframe | 16 | 94.1% |
| Users with only ED visits within five-day EUA timeframe | 1 | 5.9% |
| History of COVID-19 Diagnosis in the Seven Days Prior: | | |
| COVID-19 diagnosis only within seven-day EUA timeframe in any care setting | 17 | 100.0% |
| No COVID-19 diagnosis within seven-day EUA timeframe in any care setting | 0 | 0.0% |
| Users with any outpatient visit within seven-day EUA timeframe | 17 | 100.0% |
| Users with only non-ED outpatient visits within seven-day EUA timeframe | 16 | 94.1% |

Table 1c. Aggregated Characteristics of Bebtelovimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| Users with only ED visits within seven-day EUA timeframe | 1 | 5.9% |
| History of High Risk Conditions in the Prior Six Months: | | |
| High Risk criteria with conclusive evidence | 12 | 70.6% |
| High Risk criteria with suggestive evidence | 4 | 23.5% |
| High Risk criteria with mixed evidence | 8 | 47.1% |
| Obesity | 5 | 29.4% |
| Pregnancy | 0 | 0.0% |
| Chronic Kidney Disease | 0 | 0.0% |
| History of High Risk Conditions in the Prior Six Months: | | |
| | Number | Percent |
| Diabetes | 5 | 29.4% |
| Immunosuppressant Disease or Treatment | 7 | 41.2% |
| Cardiovascular (including Congenital Heart Disease) | 3 | 17.6% |
| Interstitial lung disease | 0 | 0.0% |
| Chronic Obstructive Pulmonary Disease (COPD) | 5 | 29.4% |
| Pulmonary Hypertension or Pulmonary Embolism | 0 | 0.0% |
| Dementia | 1 | 5.9% |
| Sickle Cell Disease | 0 | 0.0% |
| Bronchiectasis | 1 | 5.9% |
| Cancer | 2 | 11.8% |
| Cerebrovascular disease | 0 | 0.0% |
| Chronic liver disease | 2 | 11.8% |
| Cystic fibrosis | 1 | 5.9% |
| Human Immunodeficiency Virus (HIV) | 0 | 0.0% |
| Mental health conditions | 4 | 23.5% |
| Smoking current and former | 8 | 47.1% |
| Solid organ or blood stem cell transplantation | 0 | 0.0% |
| Tuberculosis | 0 | 0.0% |
| Congenital heart disease | 0 | 0.0% |
| Overweight | 3 | 17.6% |
| Substance use disorders | 1 | 5.9% |
| Thalassemia | 0 | 0.0% |
| Alpha 1 antitrypsin deficiency | 0 | 0.0% |
| Reactive airway and other respiratory diseases | 0 | 0.0% |
| Asthma | 1 | 5.9% |
| Hepatitis B | 0 | 0.0% |
| Hepatitis C | 0 | 0.0% |
| Hypertension | 8 | 47.1% |
| Recorded Use of Potent Cytochrome P450 3A4 (CYP3A) Drugs: | | |
| Potent CYP3A Inducers* in the prior three months | 0 | 0.0% |
| Potent CYP3A Inducers* in the prior month | 0 | 0.0% |
| Concomitant Potent CYP3A Inducers* | 0 | 0.0% |

Table 1c. Aggregated Characteristics of Bebtelovimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| Recorded Use of Other CYP3A Inducers: | | |
|--|---------------|----------------|
| Other CYP3A Inducers** in the prior three months | 5 | 29.4% |
| Other CYP3A Inducers** in the prior month | 3 | 17.6% |
| Concomitant Other CYP3A Inducers** | 4 | 23.5% |
| Recorded Use of Drugs Dependent on CYP3A for Clearance: | | |
| Drugs dependent on CYP3A for clearance*** in the prior three months | 4 | 23.5% |
| Drugs dependent on CYP3A for clearance*** in the prior month | 0 | 0.0% |
| Concomitant Drugs dependent on CYP3A for clearance*** | 2 | 11.8% |
| Recorded Use of Other Nirmatrelvir/Ritonavir Drug/Drug Interactors: | | |
| Other drug-drug interactors**** in the prior three months | 7 | 41.2% |
| Other drug-drug interactors**** in the prior month | 5 | 29.4% |
| Concomitant Other drug-drug interactors**** | 7 | 41.2% |
| Prior Use of Emergency Use Authorization (EUA) Agents: | | |
| | Number | Percent |
| Nirmatrelvir/Ritonavir in the two weeks prior | 0 | 0.0% |
| Sotrovimab in the two weeks prior | 0 | 0.0% |
| Bebtelovimab in the two weeks prior | 0 | 0.0% |
| Molnupiravir in the two weeks prior | 0 | 0.0% |
| Remdesivir in the two weeks prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks prior | 0 | 0.0% |
| Casirivimab and Imdevimab in the two weeks prior | 0 | 0.0% |
| Nirmatrelvir/Ritonavir 15 to 30 days prior | 0 | 0.0% |
| Sotrovimab 15 to 30 days prior | 0 | 0.0% |
| Bebtelovimab 15 to 30 days prior | 0 | 0.0% |
| Molnupiravir 15 to 30 days prior | 0 | 0.0% |
| Remdesivir 15 to 30 days prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days prior | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days prior | 0 | 0.0% |

Table 1c. Aggregated Characteristics of Bebtelovimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| Post-Index Use of EUA Agents: | | |
|--|---|------|
| Nirmatrelvir/Ritonavir in the two weeks after index | 0 | 0.0% |
| Sotrovimab in the two weeks after index | 0 | 0.0% |
| Bebtelovimab in the two weeks after index | 0 | 0.0% |
| Molnupiravir in the two weeks after index | 0 | 0.0% |
| Remdesivir in the two weeks after index | 0 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks after index | 0 | 0.0% |
| Casirivimab and Imdevimab in the two weeks after index | 0 | 0.0% |
| Nirmatrelvir/Ritonavir 15 to 30 days after index | 0 | 0.0% |
| Sotrovimab 15 to 30 days after index | 0 | 0.0% |
| Bebtelovimab 15 to 30 days after index | 0 | 0.0% |
| Molnupiravir 15 to 30 days after index | 0 | 0.0% |
| Remdesivir 15 to 30 days after index | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days after index | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days after index | 0 | 0.0% |

¹Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

²The Sentinel Common Data Model does not require outpatient dispensings to have a corresponding record in the Encounter table, therefore patient counts by encounter care setting may not sum to the total number of patients in the cohort.

*Potent CYP3A Inducers: apalutamide, carbamazepine, phenobarbital, phenytoin, rifampin, and St. John's wart.

**Other CYP3A inducers: efavirenz, nevirapine, rifabutin, betamethasone, budesonide, ciclesonide, dexamethasone, fluticasone, methylprednisolone, mometasone, prednisone, and triamcinolone.

***Drugs dependent on CYP3A for clearance: alfuzosin, pethidine, propoxyphene, ranolazine, amiodarone, dronedarone, flecainide, propafenone, quinidine, colchicine, lurasidone, pimozide, clozapine, dihydroergotamine, ergotamine, methylergonovine, lovastatin, simvastatin, sildenafil, triazolam, and oral midazolam.

****Other Drug/Drug Interactors: All other drugs in Table 1 of FDA's December 22, 2021 fact sheet.

Table 1d. Aggregated Characteristics of Molnupiravir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| Molnupiravir | | |
|---|---------------|---------------------------|
| Patient Characteristics | Number | |
| Unique patients | 2,857 | |
| Demographic Characteristics | Mean | Standard Deviation |
| Mean Age (Years) | 71.2 | 11.6 |
| Age (Years) | Number | Percent |
| 0-11 | 0 | 0.0% |
| 12-17 | 0 | 0.0% |
| 18-24 | 6 | 0.2% |
| 25-34 | 22 | 0.8% |
| 35-44 | 67 | 2.3% |
| 45-54 | 147 | 5.1% |
| 55-64 | 395 | 13.8% |
| 65-74 | 1,147 | 40.1% |
| 75-84 | 796 | 27.9% |
| ≥ 85 | 277 | 9.7% |
| Sex | | |
| Female | 1,684 | 58.9% |
| Male | 1,173 | 41.1% |
| Race¹ | | |
| American Indian or Alaska Native | 8 | 0.3% |
| Asian | 20 | 0.7% |
| Black or African American | 170 | 6.0% |
| Native Hawaiian or Other Pacific Islander | 20 | 0.7% |
| Unknown | 419 | 14.7% |
| White | 2,220 | 77.7% |
| Hispanic origin | | |
| Yes | 40 | 1.4% |
| No | 2,437 | 85.3% |
| Unknown | 380 | 13.3% |
| Year | | |
| 2021 | 0 | 0.0% |
| 2022 | 2,857 | 100.0% |
| Care Setting² | | |
| Outpatient Encounter | 1,504 | 52.6% |
| Inpatient Encounter | 7 | 0.2% |
| Emergency Department Encounter | 131 | 4.6% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| COVID-19 diagnosis only on or anytime prior to index date | 1,860 | 65.1% |
| No COVID-19 diagnosis on or anytime prior to index date | 968 | 33.9% |
| COVID-19 on the same day as index date | 1,262 | 44.2% |
| COVID-19 1-2 day prior to index date | 489 | 17.1% |

Table 1d. Aggregated Characteristics of Molnupiravir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| COVID-19 3-5 day prior to index date | 115 | 4.0% |
| COVID-19 6-7 days prior to index date | 30 | 1.1% |
| COVID-19 8-14 days prior to index date | 32 | 1.1% |
| COVID-19 15-30 days prior to index date | 21 | 0.7% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| | Number | Percent |
| COVID-19 > 30 days prior to index date | 280 | 9.8% |
| COVID-19 within 7 days after index date | 461 | 16.1% |
| COVID-19 8-14 days after index date | 270 | 9.5% |
| COVID-19 >14 days after index date | 240 | 8.4% |
| History of COVID-19 Diagnosis in the Inpatient Care Setting: | | |
| COVID-19 on the same day as index date | 10 | 0.4% |
| COVID-19 1-2 day prior to index date | 5 | 0.2% |
| COVID-19 3-5 day prior to index date | 5 | 0.2% |
| COVID-19 6-7 days prior to index date | 4 | 0.1% |
| COVID-19 8-14 days prior to index date | 6 | 0.2% |
| COVID-19 15-30 days prior to index date | 1 | 0.0% |
| COVID-19 > 30 days prior to index date | 60 | 2.1% |
| COVID-19 within 7 days after index date | 68 | 2.4% |
| COVID-19 8-14 days after index date | 47 | 1.6% |
| COVID-19 >14 days after index date | 42 | 1.5% |
| History of COVID-19 Diagnosis in the Outpatient Care Setting: | | |
| COVID-19 on the same day as index date | 1,254 | 43.9% |
| COVID-19 1-2 day prior to index date | 485 | 17.0% |
| COVID-19 3-5 day prior to index date | 112 | 3.9% |
| COVID-19 6-7 days prior to index date | 26 | 0.9% |
| COVID-19 8-14 days prior to index date | 22 | 0.8% |
| COVID-19 15-30 days prior to index date | 16 | 0.6% |
| COVID-19 > 30 days prior to index date | 251 | 8.8% |
| COVID-19 within 7 days after index date | 450 | 15.8% |
| COVID-19 8-14 days after index date | 243 | 8.5% |
| COVID-19 >14 days after index date | 218 | 7.6% |
| History of COVID-19 Diagnosis in the Five Days Prior: | | |
| COVID-19 diagnosis only within five-day EUA timeframe in any care setting | 1,711 | 59.9% |
| No COVID-19 diagnosis within five-day EUA timeframe in any care setting | 1,117 | 39.1% |
| Users with any outpatient visit within five-day EUA timeframe | 2,301 | 80.5% |
| Users with only non-ED outpatient visits within five-day EUA timeframe | 2,011 | 70.4% |
| Users with only ED visits within five-day EUA timeframe | 108 | 3.8% |
| History of COVID-19 Diagnosis in the Seven Days Prior: | | |
| COVID-19 diagnosis only within seven-day EUA timeframe in any care setting | 1,730 | 60.6% |
| No COVID-19 diagnosis within seven-day EUA timeframe in any care setting | 1,098 | 38.4% |
| Users with any outpatient visit within seven-day EUA timeframe | 2,372 | 83.0% |
| Users with only non-ED outpatient visits within seven-day EUA timeframe | 2,065 | 72.3% |

Table 1d. Aggregated Characteristics of Molnupiravir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| Users with only ED visits within seven-day EUA timeframe | 97 | 3.4% |
| History of High Risk Conditions in the Prior Six Months: | | |
| High Risk criteria with conclusive evidence | 2,615 | 91.5% |
| High Risk criteria with suggestive evidence | 419 | 14.7% |
| High Risk criteria with mixed evidence | 2,128 | 74.5% |
| Obesity | 1,094 | 38.3% |
| Pregnancy | 0 | 0.0% |
| Chronic Kidney Disease | 694 | 24.3% |
| History of High Risk Conditions in the Prior Six Months: | | |
| | Number | Percent |
| Diabetes | 1,025 | 35.9% |
| Immunosuppressant Disease or Treatment | 1,742 | 61.0% |
| Cardiovascular (including Congenital Heart Disease) | 1,192 | 41.7% |
| Interstitial lung disease | 77 | 2.7% |
| Chronic Obstructive Pulmonary Disease (COPD) | 569 | 19.9% |
| Pulmonary Hypertension or Pulmonary Embolism | 44 | 1.5% |
| Dementia | 184 | 6.4% |
| Sickle Cell Disease | 3 | 0.1% |
| Bronchiectasis | 36 | 1.3% |
| Cancer | 322 | 11.3% |
| Cerebrovascular disease | 170 | 6.0% |
| Chronic liver disease | 234 | 8.2% |
| Cystic fibrosis | 14 | 0.5% |
| Human Immunodeficiency Virus (HIV) | 7 | 0.2% |
| Mental health conditions | 712 | 24.9% |
| Smoking current and former | 689 | 24.1% |
| Solid organ or blood stem cell transplantation | 1 | 0.0% |
| Tuberculosis | 1 | 0.0% |
| Congenital heart disease | 22 | 0.8% |
| Overweight | 341 | 11.9% |
| Substance use disorders | 82 | 2.9% |
| Thalassemia | 2 | 0.1% |
| Alpha 1 antitrypsin deficiency | 5 | 0.2% |
| Reactive airway and other respiratory diseases | 2 | 0.1% |
| Asthma | 317 | 11.1% |
| Hepatitis B | 6 | 0.2% |
| Hepatitis C | 25 | 0.9% |
| Hypertension | 2,051 | 71.8% |
| Recorded Use of Potent Cytochrome P450 3A4 (CYP3A) Drugs: | | |
| Potent CYP3A Inducers* in the prior three months | 15 | 0.5% |
| Potent CYP3A Inducers* in the prior month | 10 | 0.4% |
| Concomitant Potent CYP3A Inducers* | 14 | 0.5% |

Table 1d. Aggregated Characteristics of Molnupiravir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| Recorded Use of Other CYP3A Inducers: | | |
|--|---------------|----------------|
| Other CYP3A Inducers** in the prior three months | 1,186 | 41.5% |
| Other CYP3A Inducers** in the prior month | 687 | 24.0% |
| Concomitant Other CYP3A Inducers** | 1,051 | 36.8% |
| Recorded Use of Drugs Dependent on CYP3A for Clearance: | | |
| Drugs dependent on CYP3A for clearance*** in the prior three months | 371 | 13.0% |
| Drugs dependent on CYP3A for clearance*** in the prior month | 158 | 5.5% |
| Concomitant Drugs dependent on CYP3A for clearance*** | 357 | 12.5% |
| Recorded Use of Other Nirmatrelvir/Ritonavir Drug/Drug Interactors: | | |
| Other drug-drug interactors**** in the prior three months | 1,727 | 60.4% |
| Other drug-drug interactors**** in the prior month | 924 | 32.3% |
| Concomitant Other drug-drug interactors**** | 1,692 | 59.2% |
| Prior Use of Emergency Use Authorization (EUA) Agents: | | |
| | Number | Percent |
| Nirmatrelvir/Ritonavir in the two weeks prior | 3 | 0.1% |
| Sotrovimab in the two weeks prior | 2 | 0.1% |
| Bebtelovimab in the two weeks prior | 0 | 0.0% |
| Molnupiravir in the two weeks prior | 0 | 0.0% |
| Remdesivir in the two weeks prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks prior | 0 | 0.0% |
| Casirivimab and Imdevimab in the two weeks prior | 1 | 0.0% |
| Nirmatrelvir/Ritonavir 15 to 30 days prior | 0 | 0.0% |
| Sotrovimab 15 to 30 days prior | 0 | 0.0% |
| Bebtelovimab 15 to 30 days prior | 0 | 0.0% |
| Molnupiravir 15 to 30 days prior | 0 | 0.0% |
| Remdesivir 15 to 30 days prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days prior | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days prior | 0 | 0.0% |

Table 1d. Aggregated Characteristics of Molnupiravir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| Post-Index Use of EUA Agents: | | |
|--|----|------|
| Nirmatrelvir/Ritonavir in the two weeks after index | 3 | 0.1% |
| Sotrovimab in the two weeks after index | 28 | 1.0% |
| Bebtelovimab in the two weeks after index | 0 | 0.0% |
| Molnupiravir in the two weeks after index | 4 | 0.1% |
| Remdesivir in the two weeks after index | 0 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks after index | 3 | 0.1% |
| Casirivimab and Imdevimab in the two weeks after index | 3 | 0.1% |
| Nirmatrelvir/Ritonavir 15 to 30 days after index | 0 | 0.0% |
| Sotrovimab 15 to 30 days after index | 0 | 0.0% |
| Bebtelovimab 15 to 30 days after index | 0 | 0.0% |
| Molnupiravir 15 to 30 days after index | 1 | 0.0% |
| Remdesivir 15 to 30 days after index | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days after index | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days after index | 0 | 0.0% |

¹Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

²The Sentinel Common Data Model does not require outpatient dispensings to have a corresponding record in the Encounter table, therefore patient counts by encounter care setting may not sum to the total number of patients in the cohort.

*Potent CYP3A Inducers: apalutamide, carbamazepine, phenobarbital, phenytoin, rifampin, and St. John's wart.

**Other CYP3A inducers: efavirenz, nevirapine, rifabutin, betamethasone, budesonide, ciclesonide, dexamethasone, fluticasone, methylprednisolone, mometasone, prednisone, and triamcinolone.

***Drugs dependent on CYP3A for clearance: alfuzosin, pethidine, propoxyphene, ranolazine, amiodarone, dronedarone, flecainide, propafenone, quinidine, colchicine, lurasidone, pimozide, clozapine, dihydroergotamine, ergotamine, methylergonovine, lovastatin, simvastatin, sildenafil, triazolam, and oral midazolam.

****Other Drug/Drug Interactors: All other drugs in Table 1 of FDA's December 22, 2021 fact sheet.

Table 1e. Aggregated Characteristics of Outpatient Remdesivir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| Outpatient Remdesivir | | |
|---|--------|--------------------|
| Patient Characteristics | Number | |
| Unique patients | 139 | |
| Demographic Characteristics | Mean | Standard Deviation |
| Mean Age (Years) | 66.1 | 15.5 |
| Age (Years) | Number | Percent |
| 0-11 | 0 | 0.0% |
| 12-17 | 0 | 0.0% |
| 18-24 | 0 | 0.0% |
| 25-34 | 6 | 4.3% |
| 35-44 | 11 | 7.9% |
| 45-54 | 16 | 11.5% |
| 55-64 | 25 | 18.0% |
| 65-74 | 32 | 23.0% |
| 75-84 | 37 | 26.6% |
| ≥ 85 | 12 | 8.6% |
| Sex | | |
| Female | 76 | 54.7% |
| Male | 63 | 45.3% |
| Race ¹ | | |
| American Indian or Alaska Native | 0 | 0.0% |
| Asian | 6 | 4.3% |
| Black or African American | 8 | 5.8% |
| Native Hawaiian or Other Pacific Islander | 0 | 0.0% |
| Unknown | 27 | 19.4% |
| White | 98 | 70.5% |
| Hispanic origin | | |
| Yes | 3 | 2.2% |
| No | 112 | 80.6% |
| Unknown | 24 | 17.3% |
| Year | | |
| 2021 | 7 | 5.0% |
| 2022 | 132 | 95.0% |
| Care Setting ² | | |
| Outpatient Encounter | 139 | 100.0% |
| Inpatient Encounter | 6 | 4.3% |
| Emergency Department Encounter | 103 | 74.1% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| COVID-19 diagnosis only on or anytime prior to index date | 135 | 97.1% |
| No COVID-19 diagnosis on or anytime prior to index date | 4 | 2.9% |
| COVID-19 on the same day as index date | 135 | 97.1% |
| COVID-19 1-2 day prior to index date | 38 | 27.3% |

Table 1e. Aggregated Characteristics of Outpatient Remdesivir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| COVID-19 3-5 day prior to index date | 28 | 20.1% |
| COVID-19 6-7 days prior to index date | 6 | 4.3% |
| COVID-19 8-14 days prior to index date | 6 | 4.3% |
| COVID-19 15-30 days prior to index date | 1 | 0.7% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| | Number | Percent |
| COVID-19 > 30 days prior to index date | 7 | 5.0% |
| COVID-19 within 7 days after index date | 125 | 89.9% |
| COVID-19 8-14 days after index date | 41 | 29.5% |
| COVID-19 >14 days after index date | 38 | 27.3% |
| History of COVID-19 Diagnosis in the Inpatient Care Setting: | | |
| COVID-19 on the same day as index date | 6 | 4.3% |
| COVID-19 1-2 day prior to index date | 3 | 2.2% |
| COVID-19 3-5 day prior to index date | 2 | 1.4% |
| COVID-19 6-7 days prior to index date | 1 | 0.7% |
| COVID-19 8-14 days prior to index date | 0 | 0.0% |
| COVID-19 15-30 days prior to index date | 1 | 0.7% |
| COVID-19 > 30 days prior to index date | 0 | 0.0% |
| COVID-19 within 7 days after index date | 82 | 59.0% |
| COVID-19 8-14 days after index date | 8 | 5.8% |
| COVID-19 >14 days after index date | 2 | 1.4% |
| History of COVID-19 Diagnosis in the Outpatient Care Setting: | | |
| COVID-19 on the same day as index date | 134 | 96.4% |
| COVID-19 1-2 day prior to index date | 36 | 25.9% |
| COVID-19 3-5 day prior to index date | 28 | 20.1% |
| COVID-19 6-7 days prior to index date | 5 | 3.6% |
| COVID-19 8-14 days prior to index date | 6 | 4.3% |
| COVID-19 15-30 days prior to index date | 1 | 0.7% |
| COVID-19 > 30 days prior to index date | 7 | 5.0% |
| COVID-19 within 7 days after index date | 68 | 48.9% |
| COVID-19 8-14 days after index date | 35 | 25.2% |
| COVID-19 >14 days after index date | 38 | 27.3% |
| History of COVID-19 Diagnosis in the Five Days Prior: | | |
| COVID-19 diagnosis only within five-day EUA timeframe in any care setting | 135 | 97.1% |
| No COVID-19 diagnosis within five-day EUA timeframe in any care setting | 4 | 2.9% |
| Users with any outpatient visit within five-day EUA timeframe | 139 | 100.0% |
| Users with only non-ED outpatient visits within five-day EUA timeframe | 30 | 21.6% |
| Users with only ED visits within five-day EUA timeframe | 11 | 7.9% |
| History of COVID-19 Diagnosis in the Seven Days Prior: | | |
| COVID-19 diagnosis only within seven-day EUA timeframe in any care setting | 135 | 97.1% |
| No COVID-19 diagnosis within seven-day EUA timeframe in any care setting | 4 | 2.9% |
| Users with any outpatient visit within seven-day EUA timeframe | 139 | 100.0% |
| Users with only non-ED outpatient visits within seven-day EUA timeframe | 30 | 21.6% |

Table 1e. Aggregated Characteristics of Outpatient Remdesivir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| Users with only ED visits within seven-day EUA timeframe | 11 | 7.9% |
| History of High Risk Conditions in the Prior Six Months: | | |
| High Risk criteria with conclusive evidence | 124 | 89.2% |
| High Risk criteria with suggestive evidence | 14 | 10.1% |
| High Risk criteria with mixed evidence | 96 | 69.1% |
| Obesity | 48 | 34.5% |
| Pregnancy | 1 | 0.7% |
| Chronic Kidney Disease | 31 | 22.3% |
| History of High Risk Conditions in the Prior Six Months: | | |
| | Number | Percent |
| Diabetes | 49 | 35.3% |
| Immunosuppressant Disease or Treatment | 64 | 46.0% |
| Cardiovascular (including Congenital Heart Disease) | 57 | 41.0% |
| Interstitial lung disease | 6 | 4.3% |
| Chronic Obstructive Pulmonary Disease (COPD) | 34 | 24.5% |
| Pulmonary Hypertension or Pulmonary Embolism | 2 | 1.4% |
| Dementia | 14 | 10.1% |
| Sickle Cell Disease | 1 | 0.7% |
| Bronchiectasis | 1 | 0.7% |
| Cancer | 19 | 13.7% |
| Cerebrovascular disease | 10 | 7.2% |
| Chronic liver disease | 7 | 5.0% |
| Cystic fibrosis | 0 | 0.0% |
| Human Immunodeficiency Virus (HIV) | 0 | 0.0% |
| Mental health conditions | 30 | 21.6% |
| Smoking current and former | 48 | 34.5% |
| Solid organ or blood stem cell transplantation | 0 | 0.0% |
| Tuberculosis | 0 | 0.0% |
| Congenital heart disease | 0 | 0.0% |
| Overweight | 8 | 5.8% |
| Substance use disorders | 7 | 5.0% |
| Thalassemia | 0 | 0.0% |
| Alpha 1 antitrypsin deficiency | 0 | 0.0% |
| Reactive airway and other respiratory diseases | 0 | 0.0% |
| Asthma | 21 | 15.1% |
| Hepatitis B | 0 | 0.0% |
| Hepatitis C | 2 | 1.4% |
| Hypertension | 87 | 62.6% |
| Recorded Use of Potent Cytochrome P450 3A4 (CYP3A) Drugs: | | |
| Potent CYP3A Inducers* in the prior three months | 1 | 0.7% |
| Potent CYP3A Inducers* in the prior month | 1 | 0.7% |
| Concomitant Potent CYP3A Inducers* | 1 | 0.7% |

Table 1e. Aggregated Characteristics of Outpatient Remdesivir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| Recorded Use of Other CYP3A Inducers: | | |
|--|---------------|----------------|
| Other CYP3A Inducers** in the prior three months | 49 | 35.3% |
| Other CYP3A Inducers** in the prior month | 29 | 20.9% |
| Concomitant Other CYP3A Inducers** | 43 | 30.9% |
| Recorded Use of Drugs Dependent on CYP3A for Clearance: | | |
| Drugs dependent on CYP3A for clearance*** in the prior three months | 13 | 9.4% |
| Drugs dependent on CYP3A for clearance*** in the prior month | 8 | 5.8% |
| Concomitant Drugs dependent on CYP3A for clearance*** | 14 | 10.1% |
| Recorded Use of Other Nirmatrelvir/Ritonavir Drug/Drug Interactors: | | |
| Other drug-drug interactors**** in the prior three months | 70 | 50.4% |
| Other drug-drug interactors**** in the prior month | 33 | 23.7% |
| Concomitant Other drug-drug interactors**** | 69 | 49.6% |
| Prior Use of Emergency Use Authorization (EUA) Agents: | Number | Percent |
| Nirmatrelvir/Ritonavir in the two weeks prior | 0 | 0.0% |
| Sotrovimab in the two weeks prior | 0 | 0.0% |
| Bebtelovimab in the two weeks prior | 0 | 0.0% |
| Molnupiravir in the two weeks prior | 0 | 0.0% |
| Remdesivir in the two weeks prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks prior | 0 | 0.0% |
| Casirivimab and Imdevimab in the two weeks prior | 0 | 0.0% |
| Nirmatrelvir/Ritonavir 15 to 30 days prior | 0 | 0.0% |
| Sotrovimab 15 to 30 days prior | 0 | 0.0% |
| Bebtelovimab 15 to 30 days prior | 0 | 0.0% |
| Molnupiravir 15 to 30 days prior | 0 | 0.0% |
| Remdesivir 15 to 30 days prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days prior | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days prior | 0 | 0.0% |
| Post-Index Use of EUA Agents: | | |
| Nirmatrelvir/Ritonavir in the two weeks after index | 0 | 0.0% |
| Sotrovimab in the two weeks after index | 0 | 0.0% |
| Bebtelovimab in the two weeks after index | 0 | 0.0% |
| Molnupiravir in the two weeks after index | 0 | 0.0% |
| Remdesivir in the two weeks after index | 35 | 25.2% |
| Bamlanivimab and Etesevimab in the two weeks after index | 0 | 0.0% |
| Casirivimab and Imdevimab in the two weeks after index | 0 | 0.0% |
| Nirmatrelvir/Ritonavir 15 to 30 days after index | 0 | 0.0% |
| Sotrovimab 15 to 30 days after index | 0 | 0.0% |
| Bebtelovimab 15 to 30 days after index | 0 | 0.0% |
| Molnupiravir 15 to 30 days after index | 0 | 0.0% |
| Remdesivir 15 to 30 days after index | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days after index | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days after index | 0 | 0.0% |

Table 1e. Aggregated Characteristics of Outpatient Remdesivir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

¹Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

²The Sentinel Common Data Model does not require outpatient dispensings to have a corresponding record in the Encounter table, therefore patient counts by encounter care setting may not sum to the total number of patients in the cohort.

*Potent CYP3A Inducers: apalutamide, carbamazepine, phenobarbital, phenytoin, rifampin, and St. John's wort.

**Other CYP3A inducers: efavirenz, nevirapine, rifabutin, betamethasone, budesonide, ciclesonide, dexamethasone, fluticasone, methylprednisolone, mometasone, prednisone, and triamcinolone.

***Drugs dependent on CYP3A for clearance: alfuzosin, pethidine, propoxyphene, ranolazine, amiodarone, dronedarone, flecainide, propafenone, quinidine, colchicine, lurasidone, pimozone, clozapine, dihydroergotamine, ergotamine, methylergonovine, lovastatin, simvastatin, sildenafil, triazolam, and oral midazolam.

****Other Drug/Drug Interactors: All other drugs in Table 1 of FDA's December 22, 2021 fact sheet.

Table 1f. Aggregated Characteristics of Same Day Bamlanivimab and Etesevimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| Same day Bamlanivimab and Etesevimab | | |
|---|--------|--------------------|
| Patient Characteristics | Number | |
| Unique patients | 1,372 | |
| Demographic Characteristics | Mean | Standard Deviation |
| Mean Age (Years) | 66.0 | 14.5 |
| Age (Years) | Number | Percent |
| 0-11 | 3 | 0.2% |
| 12-17 | 3 | 0.2% |
| 18-24 | 17 | 1.2% |
| 25-34 | 44 | 3.2% |
| 35-44 | 62 | 4.5% |
| 45-54 | 128 | 9.3% |
| 55-64 | 225 | 16.4% |
| 65-74 | 519 | 37.8% |
| 75-84 | 304 | 22.2% |
| ≥ 85 | 67 | 4.9% |
| Sex | | |
| Female | 783 | 57.1% |
| Male | 589 | 42.9% |
| Race ¹ | | |
| American Indian or Alaska Native | 6 | 0.4% |
| Asian | 6 | 0.4% |
| Black or African American | 98 | 7.1% |
| Native Hawaiian or Other Pacific Islander | 8 | 0.6% |
| Unknown | 341 | 24.9% |
| White | 913 | 66.5% |
| Hispanic origin | | |
| Yes | 30 | 2.2% |
| No | 1,031 | 75.1% |
| Unknown | 311 | 22.7% |
| Year | | |
| 2021 | 206 | 15.0% |
| 2022 | 1,166 | 85.0% |
| Care Setting ² | | |
| Outpatient Encounter | 1,371 | 99.9% |
| Inpatient Encounter | 10 | 0.7% |
| Emergency Department Encounter | 336 | 24.5% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| COVID-19 diagnosis only on or anytime prior to index date | 1,361 | 99.2% |
| No COVID-19 diagnosis on or anytime prior to index date | 11 | 0.8% |
| COVID-19 on the same day as index date | 1,351 | 98.5% |
| COVID-19 1-2 day prior to index date | 422 | 30.8% |

Table 1f. Aggregated Characteristics of Same Day Bamlanivimab and Etesevimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| COVID-19 3-5 day prior to index date | 291 | 21.2% |
| COVID-19 6-7 days prior to index date | 74 | 5.4% |
| COVID-19 8-14 days prior to index date | 25 | 1.8% |
| COVID-19 15-30 days prior to index date | 5 | 0.4% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| | Number | Percent |
| COVID-19 > 30 days prior to index date | 95 | 6.9% |
| COVID-19 within 7 days after index date | 236 | 17.2% |
| COVID-19 8-14 days after index date | 122 | 8.9% |
| COVID-19 >14 days after index date | 143 | 10.4% |
| History of COVID-19 Diagnosis in the Inpatient Care Setting: | | |
| COVID-19 on the same day as index date | 15 | 1.1% |
| COVID-19 1-2 day prior to index date | 2 | 0.1% |
| COVID-19 3-5 day prior to index date | 5 | 0.4% |
| COVID-19 6-7 days prior to index date | 2 | 0.1% |
| COVID-19 8-14 days prior to index date | 2 | 0.1% |
| COVID-19 15-30 days prior to index date | 1 | 0.1% |
| COVID-19 > 30 days prior to index date | 26 | 1.9% |
| COVID-19 within 7 days after index date | 34 | 2.5% |
| COVID-19 8-14 days after index date | 25 | 1.8% |
| COVID-19 >14 days after index date | 11 | 0.8% |
| History of COVID-19 Diagnosis in the Outpatient Care Setting: | | |
| COVID-19 on the same day as index date | 1,343 | 97.9% |
| COVID-19 1-2 day prior to index date | 421 | 30.7% |
| COVID-19 3-5 day prior to index date | 288 | 21.0% |
| COVID-19 6-7 days prior to index date | 74 | 5.4% |
| COVID-19 8-14 days prior to index date | 23 | 1.7% |
| COVID-19 15-30 days prior to index date | 3 | 0.2% |
| COVID-19 > 30 days prior to index date | 92 | 6.7% |
| COVID-19 within 7 days after index date | 228 | 16.6% |
| COVID-19 8-14 days after index date | 109 | 7.9% |
| COVID-19 >14 days after index date | 137 | 10.0% |
| History of COVID-19 Diagnosis in the Five Days Prior: | | |
| COVID-19 diagnosis only within five-day EUA timeframe in any care setting | 1,360 | 99.1% |
| No COVID-19 diagnosis within five-day EUA timeframe in any care setting | 12 | 0.9% |
| Users with any outpatient visit within five-day EUA timeframe | 1,372 | 100.0% |
| Users with only non-ED outpatient visits within five-day EUA timeframe | 934 | 68.1% |
| Users with only ED visits within five-day EUA timeframe | 124 | 9.0% |
| History of COVID-19 Diagnosis in the Seven Days Prior: | | |
| COVID-19 diagnosis only within seven-day EUA timeframe in any care setting | 1,361 | 99.2% |
| No COVID-19 diagnosis within seven-day EUA timeframe in any care setting | 11 | 0.8% |
| Users with any outpatient visit within seven-day EUA timeframe | 1,372 | 100.0% |
| Users with only non-ED outpatient visits within seven-day EUA timeframe | 919 | 67.0% |

Table 1f. Aggregated Characteristics of Same Day Bamlanivimab and Etesevimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| Users with only ED visits within seven-day EUA timeframe | 108 | 7.9% |
| History of High Risk Conditions in the Prior Six Months: | | |
| High Risk criteria with conclusive evidence | 1,213 | 88.4% |
| High Risk criteria with suggestive evidence | 228 | 16.6% |
| High Risk criteria with mixed evidence | 990 | 72.2% |
| Obesity | 586 | 42.7% |
| Pregnancy | 13 | 0.9% |
| Chronic Kidney Disease | 251 | 18.3% |
| History of High Risk Conditions in the Prior Six Months: | | |
| | Number | Percent |
| Diabetes | 468 | 34.1% |
| Immunosuppressant Disease or Treatment | 747 | 54.4% |
| Cardiovascular (including Congenital Heart Disease) | 555 | 40.5% |
| Interstitial lung disease | 39 | 2.8% |
| Chronic Obstructive Pulmonary Disease (COPD) | 235 | 17.1% |
| Pulmonary Hypertension or Pulmonary Embolism | 16 | 1.2% |
| Dementia | 43 | 3.1% |
| Sickle Cell Disease | 3 | 0.2% |
| Bronchiectasis | 10 | 0.7% |
| Cancer | 156 | 11.4% |
| Cerebrovascular disease | 50 | 3.6% |
| Chronic liver disease | 98 | 7.1% |
| Cystic fibrosis | 5 | 0.4% |
| Human Immunodeficiency Virus (HIV) | 10 | 0.7% |
| Mental health conditions | 274 | 20.0% |
| Smoking current and former | 357 | 26.0% |
| Solid organ or blood stem cell transplantation | 0 | 0.0% |
| Tuberculosis | 0 | 0.0% |
| Congenital heart disease | 10 | 0.7% |
| Overweight | 185 | 13.5% |
| Substance use disorders | 50 | 3.6% |
| Thalassemia | 0 | 0.0% |
| Alpha 1 antitrypsin deficiency | 2 | 0.1% |
| Reactive airway and other respiratory diseases | 0 | 0.0% |
| Asthma | 151 | 11.0% |
| Hepatitis B | 2 | 0.1% |
| Hepatitis C | 9 | 0.7% |
| Hypertension | 934 | 68.1% |
| Recorded Use of Potent Cytochrome P450 3A4 (CYP3A) Drugs: | | |
| Potent CYP3A Inducers* in the prior three months | 0 | 0.0% |
| Potent CYP3A Inducers* in the prior month | 0 | 0.0% |
| Concomitant Potent CYP3A Inducers* | 0 | 0.0% |

Table 1f. Aggregated Characteristics of Same Day Bamlanivimab and Etesevimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| Recorded Use of Other CYP3A Inducers: | | |
|--|---------------|----------------|
| Other CYP3A Inducers** in the prior three months | 581 | 42.3% |
| Other CYP3A Inducers** in the prior month | 402 | 29.3% |
| Concomitant Other CYP3A Inducers** | 452 | 32.9% |
| Recorded Use of Drugs Dependent on CYP3A for Clearance: | | |
| Drugs dependent on CYP3A for clearance*** in the prior three months | 164 | 12.0% |
| Drugs dependent on CYP3A for clearance*** in the prior month | 61 | 4.4% |
| Concomitant Drugs dependent on CYP3A for clearance*** | 161 | 11.7% |
| Recorded Use of Other Paxlovid (NIR/r) Drug/Drug Interactors: | | |
| Other drug-drug interactors**** in the prior three months | 712 | 51.9% |
| Other drug-drug interactors**** in the prior month | 338 | 24.6% |
| Concomitant Other drug-drug interactors**** | 691 | 50.4% |
| Prior Use of Emergency Use Authorization (EUA) Agents: | | |
| | Number | Percent |
| Paxlovid (NIR/r) in the two weeks prior | 4 | 0.3% |
| Sotrovimab in the two weeks prior | 0 | 0.0% |
| Bebtelovimab in the two weeks prior | 0 | 0.0% |
| Molnupiravir in the two weeks prior | 3 | 0.2% |
| Remdesivir in the two weeks prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks prior | 0 | 0.0% |
| Casirivimab and Imdevimab in the two weeks prior | 0 | 0.0% |
| Paxlovid (NIR/r) 15 to 30 days prior | 0 | 0.0% |
| Sotrovimab 15 to 30 days prior | 0 | 0.0% |
| Bebtelovimab 15 to 30 days prior | 0 | 0.0% |
| Molnupiravir 15 to 30 days prior | 0 | 0.0% |
| Remdesivir 15 to 30 days prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days prior | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days prior | 0 | 0.0% |

Table 1f. Aggregated Characteristics of Same Day Bamlanivimab and Etesevimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| Post-Index Use of EUA Agents: | | |
|--|---|------|
| Paxlovid (NIR/r) in the two weeks after index | 1 | 0.1% |
| Sotrovimab in the two weeks after index | 2 | 0.1% |
| Bebtelovimab in the two weeks after index | 0 | 0.0% |
| Molnupiravir in the two weeks after index | 0 | 0.0% |
| Remdesivir in the two weeks after index | 0 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks after index | 1 | 0.1% |
| Casirivimab and Imdevimab in the two weeks after index | 0 | 0.0% |
| Paxlovid (NIR/r) 15 to 30 days after index | 0 | 0.0% |
| Sotrovimab 15 to 30 days after index | 0 | 0.0% |
| Bebtelovimab 15 to 30 days after index | 0 | 0.0% |
| Molnupiravir 15 to 30 days after index | 0 | 0.0% |
| Remdesivir 15 to 30 days after index | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days after index | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days after index | 0 | 0.0% |

¹Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

²The Sentinel Common Data Model does not require outpatient dispensings to have a corresponding record in the Encounter table, therefore patient counts by encounter care setting may not sum to the total number of patients in the cohort.

*Potent CYP3A Inducers: apalutamide, carbamazepine, phenobarbital, phenytoin, rifampin, and St. John's wart.

**Other CYP3A inducers: efavirenz, nevirapine, rifabutin, betamethasone, budesonide, ciclesonide, dexamethasone, fluticasone, methylprednisolone, mometasone, prednisone, and triamcinolone.

***Drugs dependent on CYP3A for clearance: alfuzosin, pethidine, propoxyphene, ranolazine, amiodarone, dronedarone, flecainide, propafenone, quinidine, colchicine, lurasidone, pimozide, clozapine, dihydroergotamine, ergotamine, methylergonovine, lovastatin, simvastatin, sildenafil, triazolam, and oral midazolam.

****Other Drug/Drug Interactors: All other drugs in Table 1 of FDA's December 22, 2021 fact sheet.

Table 1g. Aggregated Characteristics of Casirivimab or Imdevimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| Casirivimab or Imdevimab | | |
|---|--------|--------------------|
| Patient Characteristics | Number | |
| Unique patients | 3,375 | |
| Demographic Characteristics | Mean | Standard Deviation |
| Mean Age (Years) | 69.2 | 12.9 |
| Age (Years) | Number | Percent |
| 0-11 | 0 | 0.0% |
| 12-17 | 4 | 0.1% |
| 18-24 | 17 | 0.5% |
| 25-34 | 55 | 1.6% |
| 35-44 | 121 | 3.6% |
| 45-54 | 234 | 6.9% |
| 55-64 | 468 | 13.9% |
| 65-74 | 1,359 | 40.3% |
| 75-84 | 858 | 25.4% |
| ≥ 85 | 259 | 7.7% |
| Sex | | |
| Female | 1,906 | 56.5% |
| Male | 1,469 | 43.5% |
| Race ¹ | | |
| American Indian or Alaska Native | 15 | 0.4% |
| Asian | 11 | 0.3% |
| Black or African American | 362 | 10.7% |
| Native Hawaiian or Other Pacific Islander | 26 | 0.8% |
| Unknown | 705 | 20.9% |
| White | 2,256 | 66.8% |
| Hispanic origin | | |
| Yes | 48 | 1.4% |
| No | 2,671 | 79.1% |
| Unknown | 656 | 19.4% |
| Year | | |
| 2021 | 358 | 10.6% |
| 2022 | 3,017 | 89.4% |
| Care Setting ² | | |
| Outpatient Encounter | 3,366 | 99.7% |
| Inpatient Encounter | 72 | 2.1% |
| Emergency Department Encounter | 416 | 12.3% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| COVID-19 diagnosis only on or anytime prior to index date | 3,331 | 98.7% |
| No COVID-19 diagnosis on or anytime prior to index date | 44 | 1.3% |
| COVID-19 on the same day as index date | 3,308 | 98.0% |
| COVID-19 1-2 day prior to index date | 1,007 | 29.8% |

Table 1g. Aggregated Characteristics of Casirivimab or Imdevimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| COVID-19 3-5 day prior to index date | 655 | 19.4% |
| COVID-19 6-7 days prior to index date | 234 | 6.9% |
| COVID-19 8-14 days prior to index date | 92 | 2.7% |
| COVID-19 15-30 days prior to index date | 6 | 0.2% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| | Number | Percent |
| COVID-19 > 30 days prior to index date | 293 | 8.7% |
| COVID-19 within 7 days after index date | 580 | 17.2% |
| COVID-19 8-14 days after index date | 297 | 8.8% |
| COVID-19 >14 days after index date | 329 | 9.7% |
| History of COVID-19 Diagnosis in the Inpatient Care Setting: | | |
| COVID-19 on the same day as index date | 76 | 2.3% |
| COVID-19 1-2 day prior to index date | 3 | 0.1% |
| COVID-19 3-5 day prior to index date | 4 | 0.1% |
| COVID-19 6-7 days prior to index date | 2 | 0.1% |
| COVID-19 8-14 days prior to index date | 3 | 0.1% |
| COVID-19 15-30 days prior to index date | 0 | 0.0% |
| COVID-19 > 30 days prior to index date | 52 | 1.5% |
| COVID-19 within 7 days after index date | 122 | 3.6% |
| COVID-19 8-14 days after index date | 65 | 1.9% |
| COVID-19 >14 days after index date | 57 | 1.7% |
| History of COVID-19 Diagnosis in the Outpatient Care Setting: | | |
| COVID-19 on the same day as index date | 3,280 | 97.2% |
| COVID-19 1-2 day prior to index date | 1,005 | 29.8% |
| COVID-19 3-5 day prior to index date | 654 | 19.4% |
| COVID-19 6-7 days prior to index date | 233 | 6.9% |
| COVID-19 8-14 days prior to index date | 91 | 2.7% |
| COVID-19 15-30 days prior to index date | 6 | 0.2% |
| COVID-19 > 30 days prior to index date | 284 | 8.4% |
| COVID-19 within 7 days after index date | 532 | 15.8% |
| COVID-19 8-14 days after index date | 256 | 7.6% |
| COVID-19 >14 days after index date | 304 | 9.0% |
| History of COVID-19 Diagnosis in the Five Days Prior: | | |
| COVID-19 diagnosis only within five-day EUA timeframe in any care setting | 3,323 | 98.5% |
| No COVID-19 diagnosis within five-day EUA timeframe in any care setting | 52 | 1.5% |
| Users with any outpatient visit within five-day EUA timeframe | 3,372 | 99.9% |
| Users with only non-ED outpatient visits within five-day EUA timeframe | 2,680 | 79.4% |
| Users with only ED visits within five-day EUA timeframe | 113 | 3.3% |
| History of COVID-19 Diagnosis in the Seven Days Prior: | | |
| COVID-19 diagnosis only within seven-day EUA timeframe in any care setting | 3,324 | 98.5% |
| No COVID-19 diagnosis within seven-day EUA timeframe in any care setting | 51 | 1.5% |
| Users with any outpatient visit within seven-day EUA timeframe | 3,372 | 99.9% |
| Users with only non-ED outpatient visits within seven-day EUA timeframe | 2,645 | 78.4% |

Table 1g. Aggregated Characteristics of Casirivimab or Imdevimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| Users with only ED visits within seven-day EUA timeframe | 101 | 3.0% |
| History of High Risk Conditions in the Prior Six Months: | | |
| High Risk criteria with conclusive evidence | 3,048 | 90.3% |
| High Risk criteria with suggestive evidence | 520 | 15.4% |
| High Risk criteria with mixed evidence | 2,506 | 74.3% |
| Obesity | 1,370 | 40.6% |
| Pregnancy | 11 | 0.3% |
| Chronic Kidney Disease | 772 | 22.9% |
| History of High Risk Conditions in the Prior Six Months: | | |
| | Number | Percent |
| Diabetes | 1,212 | 35.9% |
| Immunosuppressant Disease or Treatment | 1,968 | 58.3% |
| Cardiovascular (including Congenital Heart Disease) | 1,376 | 40.8% |
| Interstitial lung disease | 106 | 3.1% |
| Chronic Obstructive Pulmonary Disease (COPD) | 521 | 15.4% |
| Pulmonary Hypertension or Pulmonary Embolism | 42 | 1.2% |
| Dementia | 114 | 3.4% |
| Sickle Cell Disease | 2 | 0.1% |
| Bronchiectasis | 30 | 0.9% |
| Cancer | 433 | 12.8% |
| Cerebrovascular disease | 155 | 4.6% |
| Chronic liver disease | 219 | 6.5% |
| Cystic fibrosis | 10 | 0.3% |
| Human Immunodeficiency Virus (HIV) | 8 | 0.2% |
| Mental health conditions | 690 | 20.4% |
| Smoking current and former | 794 | 23.5% |
| Solid organ or blood stem cell transplantation | 1 | 0.0% |
| Tuberculosis | 0 | 0.0% |
| Congenital heart disease | 17 | 0.5% |
| Overweight | 429 | 12.7% |
| Substance use disorders | 101 | 3.0% |
| Thalassemia | 4 | 0.1% |
| Alpha 1 antitrypsin deficiency | 3 | 0.1% |
| Reactive airway and other respiratory diseases | 0 | 0.0% |
| Asthma | 324 | 9.6% |
| Hepatitis B | 0 | 0.0% |
| Hepatitis C | 26 | 0.8% |
| Hypertension | 2,425 | 71.9% |
| Recorded Use of Potent Cytochrome P450 3A4 (CYP3A) Drugs: | | |
| Potent CYP3A Inducers* in the prior three months | 11 | 0.3% |
| Potent CYP3A Inducers* in the prior month | 6 | 0.2% |
| Concomitant Potent CYP3A Inducers* | 10 | 0.3% |

Table 1g. Aggregated Characteristics of Casirivimab or Imdevimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

| Recorded Use of Other CYP3A Inducers: | | |
|--|---------------|----------------|
| Other CYP3A Inducers** in the prior three months | 1,463 | 43.3% |
| Other CYP3A Inducers** in the prior month | 974 | 28.9% |
| Concomitant Other CYP3A Inducers** | 1,145 | 33.9% |
| Recorded Use of Drugs Dependent on CYP3A for Clearance: | | |
| Drugs dependent on CYP3A for clearance*** in the prior three months | 390 | 11.6% |
| Drugs dependent on CYP3A for clearance*** in the prior month | 151 | 4.5% |
| Concomitant Drugs dependent on CYP3A for clearance*** | 377 | 11.2% |
| Recorded Use of Other Nirmatrelvir/Ritonavir Drug/Drug Interactors: | | |
| Other drug-drug interactors**** in the prior three months | 1,917 | 56.8% |
| Other drug-drug interactors**** in the prior month | 956 | 28.3% |
| Concomitant Other drug-drug interactors**** | 1,879 | 55.7% |
| Prior Use of Emergency Use Authorization (EUA) Agents: | | |
| | Number | Percent |
| Nirmatrelvir/Ritonavir in the two weeks prior | 7 | 0.2% |
| Sotrovimab in the two weeks prior | 0 | 0.0% |
| Bebtelovimab in the two weeks prior | 0 | 0.0% |
| Molnupiravir in the two weeks prior | 3 | 0.1% |
| Remdesivir in the two weeks prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks prior | 0 | 0.0% |
| Casirivimab and Imdevimab in the two weeks prior | 0 | 0.0% |
| Nirmatrelvir/Ritonavir 15 to 30 days prior | 0 | 0.0% |
| Sotrovimab 15 to 30 days prior | 0 | 0.0% |
| Bebtelovimab 15 to 30 days prior | 0 | 0.0% |
| Molnupiravir 15 to 30 days prior | 0 | 0.0% |
| Remdesivir 15 to 30 days prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days prior | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days prior | 0 | 0.0% |
| Post-Index Use of EUA Agents: | | |
| Nirmatrelvir/Ritonavir in the two weeks after index | 1 | 0.0% |
| Sotrovimab in the two weeks after index | 0 | 0.0% |
| Bebtelovimab in the two weeks after index | 0 | 0.0% |
| Molnupiravir in the two weeks after index | 1 | 0.0% |
| Remdesivir in the two weeks after index | 0 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks after index | 0 | 0.0% |
| Casirivimab and Imdevimab in the two weeks after index | 2 | 0.1% |
| Nirmatrelvir/Ritonavir 15 to 30 days after index | 0 | 0.0% |
| Sotrovimab 15 to 30 days after index | 0 | 0.0% |
| Bebtelovimab 15 to 30 days after index | 0 | 0.0% |
| Molnupiravir 15 to 30 days after index | 0 | 0.0% |
| Remdesivir 15 to 30 days after index | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days after index | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days after index | 0 | 0.0% |

Table 1g. Aggregated Characteristics of Casirivimab or Imdevimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners with Care Setting Associated Lab Tests

¹Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

²The Sentinel Common Data Model does not require outpatient dispensings to have a corresponding record in the Encounter table, therefore patient counts by encounter care setting may not sum to the total number of patients in the cohort.

*Potent CYP3A Inducers: apalutamide, carbamazepine, phenobarbital, phenytoin, rifampin, and St. John's wart.

**Other CYP3A inducers: efavirenz, nevirapine, rifabutin, betamethasone, budesonide, ciclesonide, dexamethasone, fluticasone, methylprednisolone, mometasone, prednisone, and triamcinolone.

***Drugs dependent on CYP3A for clearance: alfuzosin, pethidine, propoxyphene, ranolazine, amiodarone, dronedarone, flecainide, propafenone, quinidine, colchicine, lurasidone, pimozone, clozapine, dihydroergotamine, ergotamine, methylergonovine, lovastatin, simvastatin, sildenafil, triazolam, and oral midazolam.

****Other Drug/Drug Interactors: All other drugs in Table 1 of FDA's December 22, 2021 fact sheet.

Table 1h. Aggregated Characteristics of Nirmatrelvir/Ritonavir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| | | Nirmatrelvir/Ritonavir | |
|---|--|------------------------|--------------------|
| Patient Characteristics | | Number | |
| Unique patients | | 539 | |
| Demographic Characteristics | | Mean | Standard Deviation |
| Mean Age (Years) | | 55.7 | 16.1 |
| Age (Years) | | Number | Percent |
| 0-11 | | 0 | 0.0% |
| 12-17 | | 7 | 1.3% |
| 18-24 | | 16 | 3.0% |
| 25-34 | | 34 | 6.3% |
| 35-44 | | 79 | 14.7% |
| 45-54 | | 113 | 21.0% |
| 55-64 | | 118 | 21.9% |
| 65-74 | | 110 | 20.4% |
| 75-84 | | 49 | 9.1% |
| ≥ 85 | | 13 | 2.4% |
| Sex | | | |
| Female | | 292 | 54.2% |
| Male | | 247 | 45.8% |
| Race ¹ | | | |
| American Indian or Alaska Native | | 2 | 0.4% |
| Asian | | 21 | 3.9% |
| Black or African American | | 17 | 3.2% |
| Native Hawaiian or Other Pacific Islander | | 0 | 0.0% |
| Unknown | | 274 | 50.8% |
| White | | 225 | 41.7% |
| Hispanic origin | | | |
| Yes | | 26 | 4.8% |
| No | | 22 | 4.1% |
| Unknown | | 491 | 91.1% |
| Year | | | |
| 2021 | | 4 | 0.7% |
| 2022 | | 535 | 99.3% |
| Care Setting ² | | | |
| Outpatient Encounter | | 133 | 24.7% |
| Inpatient Encounter | | 0 | 0.0% |
| Emergency Department Encounter | | 14 | 2.6% |
| History of COVID-19 Diagnosis in Any Care Setting: | | | |
| COVID-19 diagnosis only on or anytime prior to index date | | 204 | 37.8% |
| No COVID-19 diagnosis on or anytime prior to index date | | 287 | 53.2% |
| COVID-19 on the same day as index date | | 115 | 21.3% |
| COVID-19 1-2 day prior to index date | | 44 | 8.2% |

Table 1h. Aggregated Characteristics of Nirmatrelvir/Ritonavir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| COVID-19 3-5 day prior to index date | 11 | 2.0% |
| COVID-19 6-7 days prior to index date | 3 | 0.6% |
| COVID-19 8-14 days prior to index date | 0 | 0.0% |
| COVID-19 15-30 days prior to index date | 5 | 0.9% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| | Number | Percent |
| COVID-19 > 30 days prior to index date | 55 | 10.2% |
| COVID-19 within 7 days after index date | 42 | 7.8% |
| COVID-19 8-14 days after index date | 7 | 1.3% |
| COVID-19 >14 days after index date | 4 | 0.7% |
| History of COVID-19 Diagnosis in the Inpatient Care Setting: | | |
| COVID-19 on the same day as index date | 0 | 0.0% |
| COVID-19 1-2 day prior to index date | 0 | 0.0% |
| COVID-19 3-5 day prior to index date | 0 | 0.0% |
| COVID-19 6-7 days prior to index date | 0 | 0.0% |
| COVID-19 8-14 days prior to index date | 0 | 0.0% |
| COVID-19 15-30 days prior to index date | 0 | 0.0% |
| COVID-19 > 30 days prior to index date | 7 | 1.3% |
| COVID-19 within 7 days after index date | 1 | 0.2% |
| COVID-19 8-14 days after index date | 0 | 0.0% |
| COVID-19 >14 days after index date | 0 | 0.0% |
| History of COVID-19 Diagnosis in the Outpatient Care Setting: | | |
| COVID-19 on the same day as index date | 115 | 21.3% |
| COVID-19 1-2 day prior to index date | 44 | 8.2% |
| COVID-19 3-5 day prior to index date | 11 | 2.0% |
| COVID-19 6-7 days prior to index date | 3 | 0.6% |
| COVID-19 8-14 days prior to index date | 0 | 0.0% |
| COVID-19 15-30 days prior to index date | 5 | 0.9% |
| COVID-19 > 30 days prior to index date | 54 | 10.0% |
| COVID-19 within 7 days after index date | 42 | 7.8% |
| COVID-19 8-14 days after index date | 7 | 1.3% |
| COVID-19 >14 days after index date | 4 | 0.7% |
| History of COVID-19 Diagnosis in the Five Days Prior: | | |
| COVID-19 diagnosis only within five-day EUA timeframe in any care setting | 163 | 30.2% |
| No COVID-19 diagnosis within five-day EUA timeframe in any care setting | 328 | 60.9% |
| Users with any outpatient visit within five-day EUA timeframe | 245 | 45.5% |
| Users with only non-ED outpatient visits within five-day EUA timeframe | 223 | 41.4% |
| Users with only ED visits within five-day EUA timeframe | 10 | 1.9% |
| History of COVID-19 Diagnosis in the Seven Days Prior: | | |
| COVID-19 diagnosis only within seven-day EUA timeframe in any care setting | 165 | 30.6% |
| No COVID-19 diagnosis within seven-day EUA timeframe in any care setting | 326 | 60.5% |
| Users with any outpatient visit within seven-day EUA timeframe | 269 | 49.9% |
| Users with only non-ED outpatient visits within seven-day EUA timeframe | 247 | 45.8% |

Table 1h. Aggregated Characteristics of Nirmatrelvir/Ritonavir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| Users with only ED visits within seven-day EUA timeframe | 8 | 1.5% |
| History of High Risk Conditions in the Prior Six Months: | | |
| High Risk criteria with conclusive evidence | 407 | 75.5% |
| High Risk criteria with suggestive evidence | 53 | 9.8% |
| High Risk criteria with mixed evidence | 255 | 47.3% |
| Obesity | 154 | 28.6% |
| Pregnancy | 3 | 0.6% |
| Chronic Kidney Disease | 45 | 8.3% |
| History of High Risk Conditions in the Prior Six Months: | | |
| | Number | Percent |
| Diabetes | 136 | 25.2% |
| Immunosuppressant Disease or Treatment | 256 | 47.5% |
| Cardiovascular (including Congenital Heart Disease) | 100 | 18.6% |
| Interstitial lung disease | 7 | 1.3% |
| Chronic Obstructive Pulmonary Disease (COPD) | 20 | 3.7% |
| Pulmonary Hypertension or Pulmonary Embolism | 6 | 1.1% |
| Dementia | 4 | 0.7% |
| Sickle Cell Disease | 0 | 0.0% |
| Bronchiectasis | 3 | 0.6% |
| Cancer | 44 | 8.2% |
| Cerebrovascular disease | 11 | 2.0% |
| Chronic liver disease | 25 | 4.6% |
| Cystic fibrosis | 2 | 0.4% |
| Human Immunodeficiency Virus (HIV) | 1 | 0.2% |
| Mental health conditions | 65 | 12.1% |
| Smoking current and former | 52 | 9.6% |
| Solid organ or blood stem cell transplantation | 0 | 0.0% |
| Tuberculosis | 0 | 0.0% |
| Congenital heart disease | 3 | 0.6% |
| Overweight | 39 | 7.2% |
| Substance use disorders | 16 | 3.0% |
| Thalassemia | 0 | 0.0% |
| Alpha 1 antitrypsin deficiency | 0 | 0.0% |
| Reactive airway and other respiratory diseases | 1 | 0.2% |
| Asthma | 68 | 12.6% |
| Hepatitis B | 1 | 0.2% |
| Hepatitis C | 1 | 0.2% |
| Hypertension | 220 | 40.8% |
| Recorded Use of Potent Cytochrome P450 3A4 (CYP3A) Drugs: | | |
| Potent CYP3A Inducers* in the prior three months | 2 | 0.4% |
| Potent CYP3A Inducers* in the prior month | 2 | 0.4% |
| Concomitant Potent CYP3A Inducers* | 2 | 0.4% |

Table 1h. Aggregated Characteristics of Nirmatrelvir/Ritonavir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| Recorded Use of Other CYP3A Inducers: | | |
|--|---------------|----------------|
| Other CYP3A Inducers** in the prior three months | 165 | 30.6% |
| Other CYP3A Inducers** in the prior month | 78 | 14.5% |
| Concomitant Other CYP3A Inducers** | 110 | 20.4% |
| Recorded Use of Drugs Dependent on CYP3A for Clearance: | | |
| Drugs dependent on CYP3A for clearance*** in the prior three months | 34 | 6.3% |
| Drugs dependent on CYP3A for clearance*** in the prior month | 19 | 3.5% |
| Concomitant Drugs dependent on CYP3A for clearance*** | 33 | 6.1% |
| Recorded Use of Other Nirmatrelvir/Ritonavir Drug/Drug Interactors: | | |
| Other drug-drug interactors**** in the prior three months | 218 | 40.4% |
| Other drug-drug interactors**** in the prior month | 122 | 22.6% |
| Concomitant Other drug-drug interactors**** | 210 | 39.0% |
| Prior Use of Emergency Use Authorization (EUA) Agents: | | |
| | Number | Percent |
| Nirmatrelvir/Ritonavir in the two weeks prior | 0 | 0.0% |
| Sotrovimab in the two weeks prior | 0 | 0.0% |
| Bebtelovimab in the two weeks prior | 0 | 0.0% |
| Molnupiravir in the two weeks prior | 2 | 0.4% |
| Remdesivir in the two weeks prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks prior | 0 | 0.0% |
| Casirivimab and Imdevimab in the two weeks prior | 1 | 0.2% |
| Nirmatrelvir/Ritonavir 15 to 30 days prior | 0 | 0.0% |
| Sotrovimab 15 to 30 days prior | 0 | 0.0% |
| Bebtelovimab 15 to 30 days prior | 0 | 0.0% |
| Molnupiravir 15 to 30 days prior | 0 | 0.0% |
| Remdesivir 15 to 30 days prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days prior | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days prior | 0 | 0.0% |

Table 1h. Aggregated Characteristics of Nirmatrelvir/Ritonavir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| Post-Index Use of EUA Agents: | | |
|--|---|------|
| Nirmatrelvir/Ritonavir in the two weeks after index | 0 | 0.0% |
| Sotrovimab in the two weeks after index | 5 | 0.9% |
| Bebtelovimab in the two weeks after index | 0 | 0.0% |
| Molnupiravir in the two weeks after index | 0 | 0.0% |
| Remdesivir in the two weeks after index | 0 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks after index | 0 | 0.0% |
| Casirivimab and Imdevimab in the two weeks after index | 2 | 0.4% |
| Nirmatrelvir/Ritonavir 15 to 30 days after index | 0 | 0.0% |
| Sotrovimab 15 to 30 days after index | 0 | 0.0% |
| Bebtelovimab 15 to 30 days after index | 0 | 0.0% |
| Molnupiravir 15 to 30 days after index | 0 | 0.0% |
| Remdesivir 15 to 30 days after index | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days after index | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days after index | 0 | 0.0% |

¹Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

²The Sentinel Common Data Model does not require outpatient dispensings to have a corresponding record in the Encounter table, therefore patient counts by encounter care setting may not sum to the total number of patients in the cohort.

*Potent CYP3A Inducers: apalutamide, carbamazepine, phenobarbital, phenytoin, rifampin, and St. John's wart.

**Other CYP3A inducers: efavirenz, nevirapine, rifabutin, betamethasone, budesonide, ciclesonide, dexamethasone, fluticasone, methylprednisolone, mometasone, prednisone, and triamcinolone.

***Drugs dependent on CYP3A for clearance: alfuzosin, pethidine, propoxyphene, ranolazine, amiodarone, dronedarone, flecainide, propafenone, quinidine, colchicine, lurasidone, pimozide, clozapine, dihydroergotamine, ergotamine, methylergonovine, lovastatin, simvastatin, sildenafil, triazolam, and oral midazolam.

****Other Drug/Drug Interactors: All other drugs in Table 1 of FDA's December 22, 2021 fact sheet.

Table 1i. Aggregated Characteristics of Sotrovimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| Sotrovimab | | |
|---|---------------|---------------------------|
| Patient Characteristics | Number | |
| Unique patients | 3,491 | |
| Demographic Characteristics | Mean | Standard Deviation |
| Mean Age (Years) | 59.6 | 16.8 |
| | Number | Percent |
| Age (Years) | | |
| 0-11 | 2 | 0.1% |
| 12-17 | 25 | 0.7% |
| 18-24 | 59 | 1.7% |
| 25-34 | 241 | 6.9% |
| 35-44 | 421 | 12.1% |
| 45-54 | 532 | 15.2% |
| 55-64 | 720 | 20.6% |
| 65-74 | 823 | 23.6% |
| 75-84 | 490 | 14.0% |
| ≥ 85 | 178 | 5.1% |
| Sex | | |
| Female | 2,053 | 58.8% |
| Male | 1,438 | 41.2% |
| Race ¹ | | |
| American Indian or Alaska Native | 14 | 0.4% |
| Asian | 63 | 1.8% |
| Black or African American | 140 | 4.0% |
| Native Hawaiian or Other Pacific Islander | 1 | 0.0% |
| Unknown | 1,603 | 45.9% |
| White | 1,670 | 47.8% |
| Hispanic origin | | |
| Yes | 124 | 3.6% |
| No | 30 | 0.9% |
| Unknown | 3,337 | 95.6% |
| Year | | |
| 2021 | 847 | 24.3% |
| 2022 | 2,644 | 75.7% |
| Care Setting² | | |
| Outpatient Encounter | 3,491 | 100.0% |
| Inpatient Encounter | 2 | 0.1% |
| Emergency Department Encounter | 742 | 21.3% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| COVID-19 diagnosis only on or anytime prior to index date | 3,378 | 96.8% |
| No COVID-19 diagnosis on or anytime prior to index date | 113 | 3.2% |
| COVID-19 on the same day as index date | 3,284 | 94.1% |
| COVID-19 1-2 day prior to index date | 887 | 25.4% |

Table 1i. Aggregated Characteristics of Sotrovimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| | | |
|--|-------|--------|
| COVID-19 3-5 day prior to index date | 546 | 15.6% |
| COVID-19 6-7 days prior to index date | 131 | 3.8% |
| COVID-19 8-14 days prior to index date | 52 | 1.5% |
| COVID-19 15-30 days prior to index date | 18 | 0.5% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| COVID-19 > 30 days prior to index date | 344 | 9.9% |
| COVID-19 within 7 days after index date | 483 | 13.8% |
| COVID-19 8-14 days after index date | 173 | 5.0% |
| COVID-19 >14 days after index date | 84 | 2.4% |
| History of COVID-19 Diagnosis in the Inpatient Care Setting: | | |
| COVID-19 on the same day as index date | 2 | 0.1% |
| COVID-19 1-2 day prior to index date | 1 | 0.0% |
| COVID-19 3-5 day prior to index date | 1 | 0.0% |
| COVID-19 6-7 days prior to index date | 0 | 0.0% |
| COVID-19 8-14 days prior to index date | 1 | 0.0% |
| COVID-19 15-30 days prior to index date | 0 | 0.0% |
| COVID-19 > 30 days prior to index date | 48 | 1.4% |
| COVID-19 within 7 days after index date | 12 | 0.3% |
| COVID-19 8-14 days after index date | 1 | 0.0% |
| COVID-19 >14 days after index date | 1 | 0.0% |
| History of COVID-19 Diagnosis in the Outpatient Care Setting: | | |
| COVID-19 on the same day as index date | 3,284 | 94.1% |
| COVID-19 1-2 day prior to index date | 886 | 25.4% |
| COVID-19 3-5 day prior to index date | 546 | 15.6% |
| COVID-19 6-7 days prior to index date | 131 | 3.8% |
| COVID-19 8-14 days prior to index date | 52 | 1.5% |
| COVID-19 15-30 days prior to index date | 18 | 0.5% |
| COVID-19 > 30 days prior to index date | 340 | 9.7% |
| COVID-19 within 7 days after index date | 478 | 13.7% |
| COVID-19 8-14 days after index date | 173 | 5.0% |
| COVID-19 >14 days after index date | 84 | 2.4% |
| History of COVID-19 Diagnosis in the Five Days Prior: | | |
| COVID-19 diagnosis only within five-day EUA timeframe in any care setting | 3,358 | 96.2% |
| No COVID-19 diagnosis within five-day EUA timeframe in any care setting | 133 | 3.8% |
| Users with any outpatient visit within five-day EUA timeframe | 3,491 | 100.0% |
| Users with only non-ED outpatient visits within five-day EUA timeframe | 2,541 | 72.8% |
| Users with only ED visits within five-day EUA timeframe | 279 | 8.0% |
| History of COVID-19 Diagnosis in the Seven Days Prior: | | |
| COVID-19 diagnosis only within seven-day EUA timeframe in any care setting | 3,362 | 96.3% |
| No COVID-19 diagnosis within seven-day EUA timeframe in any care setting | 129 | 3.7% |
| Users with any outpatient visit within seven-day EUA timeframe | 3,491 | 100.0% |
| Users with only non-ED outpatient visits within seven-day EUA timeframe | 2,526 | 72.4% |

Table 1i. Aggregated Characteristics of Sotrovimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| Users with only ED visits within seven-day EUA timeframe | 247 | 7.1% |
| History of High Risk Conditions in the Prior Six Months: | | |
| High Risk criteria with conclusive evidence | 3,015 | 86.4% |
| High Risk criteria with suggestive evidence | 394 | 11.3% |
| High Risk criteria with mixed evidence | 2,070 | 59.3% |
| Obesity | 1,210 | 34.7% |
| Pregnancy | 96 | 2.7% |
| Chronic Kidney Disease | 599 | 17.2% |
| History of High Risk Conditions in the Prior Six Months: | | |
| | Number | Percent |
| Diabetes | 913 | 26.2% |
| Immunosuppressant Disease or Treatment | 1,986 | 56.9% |
| Cardiovascular (including Congenital Heart Disease) | 1,050 | 30.1% |
| Interstitial lung disease | 91 | 2.6% |
| Chronic Obstructive Pulmonary Disease (COPD) | 253 | 7.2% |
| Pulmonary Hypertension or Pulmonary Embolism | 65 | 1.9% |
| Dementia | 58 | 1.7% |
| Sickle Cell Disease | 5 | 0.1% |
| Bronchiectasis | 35 | 1.0% |
| Cancer | 577 | 16.5% |
| Cerebrovascular disease | 118 | 3.4% |
| Chronic liver disease | 282 | 8.1% |
| Cystic fibrosis | 18 | 0.5% |
| Human Immunodeficiency Virus (HIV) | 21 | 0.6% |
| Mental health conditions | 512 | 14.7% |
| Smoking current and former | 594 | 17.0% |
| Solid organ or blood stem cell transplantation | 9 | 0.3% |
| Tuberculosis | 6 | 0.2% |
| Congenital heart disease | 55 | 1.6% |
| Overweight | 326 | 9.3% |
| Substance use disorders | 67 | 1.9% |
| Thalassemia | 4 | 0.1% |
| Alpha 1 antitrypsin deficiency | 3 | 0.1% |
| Reactive airway and other respiratory diseases | 4 | 0.1% |
| Asthma | 467 | 13.4% |
| Hepatitis B | 5 | 0.1% |
| Hepatitis C | 13 | 0.4% |
| Hypertension | 1,867 | 53.5% |
| Recorded Use of Potent Cytochrome P450 3A4 (CYP3A) Drugs: | | |
| Potent CYP3A Inducers* in the prior three months | 4 | 0.1% |
| Potent CYP3A Inducers* in the prior month | 2 | 0.1% |
| Concomitant Potent CYP3A Inducers* | 4 | 0.1% |

Table 1i. Aggregated Characteristics of Sotrovimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| Recorded Use of Other CYP3A Inducers: | | |
|--|---------------|----------------|
| Other CYP3A Inducers** in the prior three months | 834 | 23.9% |
| Other CYP3A Inducers** in the prior month | 489 | 14.0% |
| Concomitant Other CYP3A Inducers** | 508 | 14.6% |
| Recorded Use of Drugs Dependent on CYP3A for Clearance: | | |
| Drugs dependent on CYP3A for clearance*** in the prior three months | 154 | 4.4% |
| Drugs dependent on CYP3A for clearance*** in the prior month | 68 | 1.9% |
| Concomitant Drugs dependent on CYP3A for clearance*** | 149 | 4.3% |
| Recorded Use of Other Nirmatrelvir/Ritonavir Drug/Drug Interactors: | | |
| Other drug-drug interactors**** in the prior three months | 897 | 25.7% |
| Other drug-drug interactors**** in the prior month | 499 | 14.3% |
| Concomitant Other drug-drug interactors**** | 859 | 24.6% |
| Prior Use of Emergency Use Authorization (EUA) Agents: | | |
| | Number | Percent |
| Nirmatrelvir/Ritonavir in the two weeks prior | 6 | 0.2% |
| Sotrovimab in the two weeks prior | 0 | 0.0% |
| Bebtelovimab in the two weeks prior | 0 | 0.0% |
| Molnupiravir in the two weeks prior | 2 | 0.1% |
| Remdesivir in the two weeks prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks prior | 0 | 0.0% |
| Casirivimab and Imdevimab in the two weeks prior | 2 | 0.1% |
| Nirmatrelvir/Ritonavir 15 to 30 days prior | 0 | 0.0% |
| Sotrovimab 15 to 30 days prior | 0 | 0.0% |
| Bebtelovimab 15 to 30 days prior | 0 | 0.0% |
| Molnupiravir 15 to 30 days prior | 0 | 0.0% |
| Remdesivir 15 to 30 days prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days prior | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days prior | 0 | 0.0% |

Table 1i. Aggregated Characteristics of Sotrovimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| Post-Index Use of EUA Agents: | | |
|--|----|------|
| Nirmatrelvir/Ritonavir in the two weeks after index | 0 | 0.0% |
| Sotrovimab in the two weeks after index | 20 | 0.6% |
| Bebtelovimab in the two weeks after index | 0 | 0.0% |
| Molnupiravir in the two weeks after index | 0 | 0.0% |
| Remdesivir in the two weeks after index | 2 | 0.1% |
| Bamlanivimab and Etesevimab in the two weeks after index | 0 | 0.0% |
| Casirivimab and Imdevimab in the two weeks after index | 0 | 0.0% |
| Nirmatrelvir/Ritonavir 15 to 30 days after index | 0 | 0.0% |
| Sotrovimab 15 to 30 days after index | 0 | 0.0% |
| Bebtelovimab 15 to 30 days after index | 0 | 0.0% |
| Molnupiravir 15 to 30 days after index | 0 | 0.0% |
| Remdesivir 15 to 30 days after index | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days after index | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days after index | 0 | 0.0% |

¹Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

²The Sentinel Common Data Model does not require outpatient dispensings to have a corresponding record in the Encounter table, therefore patient counts by encounter care setting may not sum to the total number of patients in the cohort.

*Potent CYP3A Inducers: apalutamide, carbamazepine, phenobarbital, phenytoin, rifampin, and St. John's wart.

**Other CYP3A inducers: efavirenz, nevirapine, rifabutin, betamethasone, budesonide, ciclesonide, dexamethasone, fluticasone, methylprednisolone, mometasone, prednisone, and triamcinolone.

***Drugs dependent on CYP3A for clearance: alfuzosin, pethidine, propoxyphene, ranolazine, amiodarone, dronedarone, flecainide, propafenone, quinidine, colchicine, lurasidone, pimozide, clozapine, dihydroergotamine, ergotamine, methylergonovine, lovastatin, simvastatin, sildenafil, triazolam, and oral midazolam.

****Other Drug/Drug Interactors: All other drugs in Table 1 of FDA's December 22, 2021 fact sheet.

Table 1j. Aggregated Characteristics of Bebtelovimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| | | Bebtelovimab | |
|---|--|--------------|--------------------|
| Patient Characteristics | | Number | |
| Unique patients | | 0 | |
| Demographic Characteristics | | Mean | Standard Deviation |
| Mean Age (Years) | | - | - |
| Age (Years) | | Number | Percent |
| 0-11 | | - | - |
| 12-17 | | - | - |
| 18-24 | | - | - |
| 25-34 | | - | - |
| 35-44 | | - | - |
| 45-54 | | - | - |
| 55-64 | | - | - |
| 65-74 | | - | - |
| 75-84 | | - | - |
| ≥ 85 | | - | - |
| Sex | | | |
| Female | | - | - |
| Male | | - | - |
| Race ¹ | | | |
| American Indian or Alaska Native | | - | - |
| Asian | | - | - |
| Black or African American | | - | - |
| Native Hawaiian or Other Pacific Islander | | - | - |
| Unknown | | - | - |
| White | | - | - |
| Hispanic origin | | | |
| Yes | | - | - |
| No | | - | - |
| Unknown | | - | - |
| Year | | | |
| 2021 | | - | - |
| 2022 | | - | - |
| Care Setting ² | | | |
| Outpatient Encounter | | - | - |
| Inpatient Encounter | | - | - |
| Emergency Department Encounter | | - | - |
| History of COVID-19 Diagnosis in Any Care Setting: | | | |
| COVID-19 diagnosis only on or anytime prior to index date | | - | - |
| No COVID-19 diagnosis on or anytime prior to index date | | - | - |
| COVID-19 on the same day as index date | | - | - |
| COVID-19 1-2 day prior to index date | | - | - |

Table 1j. Aggregated Characteristics of Bebtelovimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| COVID-19 3-5 day prior to index date | - | - |
| COVID-19 6-7 days prior to index date | - | - |
| COVID-19 8-14 days prior to index date | - | - |
| COVID-19 15-30 days prior to index date | - | - |
| History of COVID-19 Diagnosis in Any Care Setting: | Number | Percent |
| COVID-19 > 30 days prior to index date | - | - |
| COVID-19 within 7 days after index date | - | - |
| COVID-19 8-14 days after index date | - | - |
| COVID-19 >14 days after index date | - | - |
| History of COVID-19 Diagnosis in the Inpatient Care Setting: | | |
| COVID-19 on the same day as index date | - | - |
| COVID-19 1-2 day prior to index date | - | - |
| COVID-19 3-5 day prior to index date | - | - |
| COVID-19 6-7 days prior to index date | - | - |
| COVID-19 8-14 days prior to index date | - | - |
| COVID-19 15-30 days prior to index date | - | - |
| COVID-19 > 30 days prior to index date | - | - |
| COVID-19 within 7 days after index date | - | - |
| COVID-19 8-14 days after index date | - | - |
| COVID-19 >14 days after index date | - | - |
| History of COVID-19 Diagnosis in the Outpatient Care Setting: | | |
| COVID-19 on the same day as index date | - | - |
| COVID-19 1-2 day prior to index date | - | - |
| COVID-19 3-5 day prior to index date | - | - |
| COVID-19 6-7 days prior to index date | - | - |
| COVID-19 8-14 days prior to index date | - | - |
| COVID-19 15-30 days prior to index date | - | - |
| COVID-19 > 30 days prior to index date | - | - |
| COVID-19 within 7 days after index date | - | - |
| COVID-19 8-14 days after index date | - | - |
| COVID-19 >14 days after index date | - | - |
| History of COVID-19 Diagnosis in the Five Days Prior: | | |
| COVID-19 diagnosis only within five-day EUA timeframe in any care setting | - | - |
| No COVID-19 diagnosis within five-day EUA timeframe in any care setting | - | - |
| Users with any outpatient visit within five-day EUA timeframe | - | - |
| Users with only non-ED outpatient visits within five-day EUA timeframe | - | - |
| Users with only ED visits within five-day EUA timeframe | - | - |
| History of COVID-19 Diagnosis in the Seven Days Prior: | | |
| COVID-19 diagnosis only within seven-day EUA timeframe in any care setting | - | - |
| No COVID-19 diagnosis within seven-day EUA timeframe in any care setting | - | - |
| Users with any outpatient visit within seven-day EUA timeframe | - | - |
| Users with only non-ED outpatient visits within seven-day EUA timeframe | - | - |

Table 1j. Aggregated Characteristics of Bebtelovimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| Users with only ED visits within seven-day EUA timeframe | - | - |
| History of High Risk Conditions in the Prior Six Months: | | |
| High Risk criteria with conclusive evidence | - | - |
| High Risk criteria with suggestive evidence | - | - |
| High Risk criteria with mixed evidence | - | - |
| Obesity | - | - |
| Pregnancy | - | - |
| Chronic Kidney Disease | - | - |
| History of High Risk Conditions in the Prior Six Months: | | |
| | Number | Percent |
| Diabetes | - | - |
| Immunosuppressant Disease or Treatment | - | - |
| Cardiovascular (including Congenital Heart Disease) | - | - |
| Interstitial lung disease | - | - |
| Chronic Obstructive Pulmonary Disease (COPD) | - | - |
| Pulmonary Hypertension or Pulmonary Embolism | - | - |
| Dementia | - | - |
| Sickle Cell Disease | - | - |
| Bronchiectasis | - | - |
| Cancer | - | - |
| Cerebrovascular disease | - | - |
| Chronic liver disease | - | - |
| Cystic fibrosis | - | - |
| Human Immunodeficiency Virus (HIV) | - | - |
| Mental health conditions | - | - |
| Smoking current and former | - | - |
| Solid organ or blood stem cell transplantation | - | - |
| Tuberculosis | - | - |
| Congenital heart disease | - | - |
| Overweight | - | - |
| Substance use disorders | - | - |
| Thalassemia | - | - |
| Alpha 1 antitrypsin deficiency | - | - |
| Reactive airway and other respiratory diseases | - | - |
| Asthma | - | - |
| Hepatitis B | - | - |
| Hepatitis C | - | - |
| Hypertension | - | - |
| Recorded Use of Potent Cytochrome P450 3A4 (CYP3A) Drugs: | | |
| Potent CYP3A Inducers* in the prior three months | - | - |
| Potent CYP3A Inducers* in the prior month | - | - |
| Concomitant Potent CYP3A Inducers* | - | - |

Table 1j. Aggregated Characteristics of Bebtelovimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| Recorded Use of Other CYP3A Inducers: | | |
|--|---------------|----------------|
| Other CYP3A Inducers** in the prior three months | - | - |
| Other CYP3A Inducers** in the prior month | - | - |
| Concomitant Other CYP3A Inducers** | - | - |
| Recorded Use of Drugs Dependent on CYP3A for Clearance: | | |
| Drugs dependent on CYP3A for clearance*** in the prior three months | - | - |
| Drugs dependent on CYP3A for clearance*** in the prior month | - | - |
| Concomitant Drugs dependent on CYP3A for clearance*** | - | - |
| Recorded Use of Other Nirmatrelvir/Ritonavir Drug/Drug Interactors: | | |
| Other drug-drug interactors**** in the prior three months | - | - |
| Other drug-drug interactors**** in the prior month | - | - |
| Concomitant Other drug-drug interactors**** | - | - |
| Prior Use of Emergency Use Authorization (EUA) Agents: | | |
| | Number | Percent |
| Nirmatrelvir/Ritonavir in the two weeks prior | - | - |
| Sotrovimab in the two weeks prior | - | - |
| Bebtelovimab in the two weeks prior | - | - |
| Molnupiravir in the two weeks prior | - | - |
| Remdesivir in the two weeks prior | - | - |
| Bamlanivimab and Etesevimab in the two weeks prior | - | - |
| Casirivimab and Imdevimab in the two weeks prior | - | - |
| Nirmatrelvir/Ritonavir 15 to 30 days prior | - | - |
| Sotrovimab 15 to 30 days prior | - | - |
| Bebtelovimab 15 to 30 days prior | - | - |
| Molnupiravir 15 to 30 days prior | - | - |
| Remdesivir 15 to 30 days prior | - | - |
| Bamlanivimab and Etesevimab 15 to 30 days prior | - | - |
| Casirivimab and Imdevimab 15 to 30 days prior | - | - |

Table 1j. Aggregated Characteristics of Bebtelovimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| Post-Index Use of EUA Agents: | | |
|--|---|---|
| Nirmatrelvir/Ritonavir in the two weeks after index | - | - |
| Sotrovimab in the two weeks after index | - | - |
| Bebtelovimab in the two weeks after index | - | - |
| Molnupiravir in the two weeks after index | - | - |
| Remdesivir in the two weeks after index | - | - |
| Bamlanivimab and Etesevimab in the two weeks after index | - | - |
| Casirivimab and Imdevimab in the two weeks after index | - | - |
| Nirmatrelvir/Ritonavir 15 to 30 days after index | - | - |
| Sotrovimab 15 to 30 days after index | - | - |
| Bebtelovimab 15 to 30 days after index | - | - |
| Molnupiravir 15 to 30 days after index | - | - |
| Remdesivir 15 to 30 days after index | - | - |
| Bamlanivimab and Etesevimab 15 to 30 days after index | - | - |
| Casirivimab and Imdevimab 15 to 30 days after index | - | - |

¹Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

²The Sentinel Common Data Model does not require outpatient dispensings to have a corresponding record in the Encounter table, therefore patient counts by encounter care setting may not sum to the total number of patients in the cohort.

*Potent CYP3A Inducers: apalutamide, carbamazepine, phenobarbital, phenytoin, rifampin, and St. John's wart.

**Other CYP3A inducers: efavirenz, nevirapine, rifabutin, betamethasone, budesonide, ciclesonide, dexamethasone, fluticasone, methylprednisolone, mometasone, prednisone, and triamcinolone.

***Drugs dependent on CYP3A for clearance: alfuzosin, pethidine, propoxyphene, ranolazine, amiodarone, dronedarone, flecainide, propafenone, quinidine, colchicine, lurasidone, pimozide, clozapine, dihydroergotamine, ergotamine, methylergonovine, lovastatin, simvastatin, sildenafil, triazolam, and oral midazolam.

****Other Drug/Drug Interactors: All other drugs in Table 1 of FDA's December 22, 2021 fact sheet.

Table 1k. Aggregated Characteristics of Molnupiravir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| Molnupiravir | | |
|---|---------------|---------------------------|
| Patient Characteristics | Number | |
| Unique patients | 576 | |
| Demographic Characteristics | Mean | Standard Deviation |
| Mean Age (Years) | 59.3 | 16.0 |
| | Number | Percent |
| Age (Years) | | |
| 0-11 | 0 | 0.0% |
| 12-17 | 0 | 0.0% |
| 18-24 | 12 | 2.1% |
| 25-34 | 31 | 5.4% |
| 35-44 | 73 | 12.7% |
| 45-54 | 103 | 17.9% |
| 55-64 | 137 | 23.8% |
| 65-74 | 122 | 21.2% |
| 75-84 | 72 | 12.5% |
| ≥ 85 | 26 | 4.5% |
| Sex | | |
| Female | 327 | 56.8% |
| Male | 249 | 43.2% |
| Race ¹ | | |
| American Indian or Alaska Native | 4 | 0.7% |
| Asian | 25 | 4.3% |
| Black or African American | 41 | 7.1% |
| Native Hawaiian or Other Pacific Islander | 1 | 0.2% |
| Unknown | 255 | 44.3% |
| White | 250 | 43.4% |
| Hispanic origin | | |
| Yes | 42 | 7.3% |
| No | 93 | 16.1% |
| Unknown | 441 | 76.6% |
| Year | | |
| 2021 | 0 | 0.0% |
| 2022 | 576 | 100.0% |
| Care Setting² | | |
| Outpatient Encounter | 162 | 28.1% |
| Inpatient Encounter | 0 | 0.0% |
| Emergency Department Encounter | 9 | 1.6% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| COVID-19 diagnosis only on or anytime prior to index date | 240 | 41.7% |
| No COVID-19 diagnosis on or anytime prior to index date | 311 | 54.0% |
| COVID-19 on the same day as index date | 143 | 24.8% |
| COVID-19 1-2 day prior to index date | 57 | 9.9% |

Table 1k. Aggregated Characteristics of Molnupiravir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| COVID-19 3-5 day prior to index date | 19 | 3.3% |
| COVID-19 6-7 days prior to index date | 2 | 0.3% |
| COVID-19 8-14 days prior to index date | 3 | 0.5% |
| COVID-19 15-30 days prior to index date | 3 | 0.5% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| | Number | Percent |
| COVID-19 > 30 days prior to index date | 65 | 11.3% |
| COVID-19 within 7 days after index date | 45 | 7.8% |
| COVID-19 8-14 days after index date | 8 | 1.4% |
| COVID-19 >14 days after index date | 1 | 0.2% |
| History of COVID-19 Diagnosis in the Inpatient Care Setting: | | |
| COVID-19 on the same day as index date | 0 | 0.0% |
| COVID-19 1-2 day prior to index date | 0 | 0.0% |
| COVID-19 3-5 day prior to index date | 1 | 0.2% |
| COVID-19 6-7 days prior to index date | 0 | 0.0% |
| COVID-19 8-14 days prior to index date | 0 | 0.0% |
| COVID-19 15-30 days prior to index date | 0 | 0.0% |
| COVID-19 > 30 days prior to index date | 9 | 1.6% |
| COVID-19 within 7 days after index date | 1 | 0.2% |
| COVID-19 8-14 days after index date | 0 | 0.0% |
| COVID-19 >14 days after index date | 0 | 0.0% |
| History of COVID-19 Diagnosis in the Outpatient Care Setting: | | |
| COVID-19 on the same day as index date | 143 | 24.8% |
| COVID-19 1-2 day prior to index date | 57 | 9.9% |
| COVID-19 3-5 day prior to index date | 19 | 3.3% |
| COVID-19 6-7 days prior to index date | 2 | 0.3% |
| COVID-19 8-14 days prior to index date | 3 | 0.5% |
| COVID-19 15-30 days prior to index date | 3 | 0.5% |
| COVID-19 > 30 days prior to index date | 65 | 11.3% |
| COVID-19 within 7 days after index date | 45 | 7.8% |
| COVID-19 8-14 days after index date | 8 | 1.4% |
| COVID-19 >14 days after index date | 1 | 0.2% |
| History of COVID-19 Diagnosis in the Five Days Prior: | | |
| COVID-19 diagnosis only within five-day EUA timeframe in any care setting | 203 | 35.2% |
| No COVID-19 diagnosis within five-day EUA timeframe in any care setting | 348 | 60.4% |
| Users with any outpatient visit within five-day EUA timeframe | 289 | 50.2% |
| Users with only non-ED outpatient visits within five-day EUA timeframe | 268 | 46.5% |
| Users with only ED visits within five-day EUA timeframe | 10 | 1.7% |
| History of COVID-19 Diagnosis in the Seven Days Prior: | | |
| COVID-19 diagnosis only within seven-day EUA timeframe in any care setting | 204 | 35.4% |
| No COVID-19 diagnosis within seven-day EUA timeframe in any care setting | 347 | 60.2% |
| Users with any outpatient visit within seven-day EUA timeframe | 312 | 54.2% |
| Users with only non-ED outpatient visits within seven-day EUA timeframe | 289 | 50.2% |

Table 1k. Aggregated Characteristics of Molnupiravir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| Users with only ED visits within seven-day EUA timeframe | 10 | 1.7% |
| History of High Risk Conditions in the Prior Six Months: | | |
| High Risk criteria with conclusive evidence | 478 | 83.0% |
| High Risk criteria with suggestive evidence | 63 | 10.9% |
| High Risk criteria with mixed evidence | 324 | 56.3% |
| Obesity | 184 | 31.9% |
| Pregnancy | 3 | 0.5% |
| Chronic Kidney Disease | 88 | 15.3% |
| History of High Risk Conditions in the Prior Six Months: | | |
| | Number | Percent |
| Diabetes | 174 | 30.2% |
| Immunosuppressant Disease or Treatment | 284 | 49.3% |
| Cardiovascular (including Congenital Heart Disease) | 139 | 24.1% |
| Interstitial lung disease | 9 | 1.6% |
| Chronic Obstructive Pulmonary Disease (COPD) | 41 | 7.1% |
| Pulmonary Hypertension or Pulmonary Embolism | 9 | 1.6% |
| Dementia | 13 | 2.3% |
| Sickle Cell Disease | 2 | 0.3% |
| Bronchiectasis | 9 | 1.6% |
| Cancer | 41 | 7.1% |
| Cerebrovascular disease | 14 | 2.4% |
| Chronic liver disease | 37 | 6.4% |
| Cystic fibrosis | 2 | 0.3% |
| Human Immunodeficiency Virus (HIV) | 7 | 1.2% |
| Mental health conditions | 96 | 16.7% |
| Smoking current and former | 85 | 14.8% |
| Solid organ or blood stem cell transplantation | 1 | 0.2% |
| Tuberculosis | 1 | 0.2% |
| Congenital heart disease | 5 | 0.9% |
| Overweight | 50 | 8.7% |
| Substance use disorders | 12 | 2.1% |
| Thalassemia | 0 | 0.0% |
| Alpha 1 antitrypsin deficiency | 1 | 0.2% |
| Reactive airway and other respiratory diseases | 0 | 0.0% |
| Asthma | 54 | 9.4% |
| Hepatitis B | 2 | 0.3% |
| Hepatitis C | 3 | 0.5% |
| Hypertension | 296 | 51.4% |
| Recorded Use of Potent Cytochrome P450 3A4 (CYP3A) Drugs: | | |
| Potent CYP3A Inducers* in the prior three months | 0 | 0.0% |
| Potent CYP3A Inducers* in the prior month | 0 | 0.0% |
| Concomitant Potent CYP3A Inducers* | 0 | 0.0% |

Table 1k. Aggregated Characteristics of Molnupiravir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| Recorded Use of Other CYP3A Inducers: | | |
|--|---------------|----------------|
| Other CYP3A Inducers** in the prior three months | 190 | 33.0% |
| Other CYP3A Inducers** in the prior month | 114 | 19.8% |
| Concomitant Other CYP3A Inducers** | 175 | 30.4% |
| Recorded Use of Drugs Dependent on CYP3A for Clearance: | | |
| Drugs dependent on CYP3A for clearance*** in the prior three months | 51 | 8.9% |
| Drugs dependent on CYP3A for clearance*** in the prior month | 23 | 4.0% |
| Concomitant Drugs dependent on CYP3A for clearance*** | 49 | 8.5% |
| Recorded Use of Other Nirmatrelvir/Ritonavir Drug/Drug Interactors: | | |
| Other drug-drug interactors**** in the prior three months | 280 | 48.6% |
| Other drug-drug interactors**** in the prior month | 179 | 31.1% |
| Concomitant Other drug-drug interactors**** | 270 | 46.9% |
| Prior Use of Emergency Use Authorization (EUA) Agents: | | |
| | Number | Percent |
| Nirmatrelvir/Ritonavir in the two weeks prior | 0 | 0.0% |
| Sotrovimab in the two weeks prior | 0 | 0.0% |
| Bebtelovimab in the two weeks prior | 0 | 0.0% |
| Molnupiravir in the two weeks prior | 0 | 0.0% |
| Remdesivir in the two weeks prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks prior | 0 | 0.0% |
| Casirivimab and Imdevimab in the two weeks prior | 0 | 0.0% |
| Nirmatrelvir/Ritonavir 15 to 30 days prior | 0 | 0.0% |
| Sotrovimab 15 to 30 days prior | 0 | 0.0% |
| Bebtelovimab 15 to 30 days prior | 0 | 0.0% |
| Molnupiravir 15 to 30 days prior | 0 | 0.0% |
| Remdesivir 15 to 30 days prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days prior | 1 | 0.2% |
| Casirivimab and Imdevimab 15 to 30 days prior | 0 | 0.0% |

Table 1k. Aggregated Characteristics of Molnupiravir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| Post-Index Use of EUA Agents: | | |
|--|---|------|
| Nirmatrelvir/Ritonavir in the two weeks after index | 2 | 0.3% |
| Sotrovimab in the two weeks after index | 2 | 0.3% |
| Bebtelovimab in the two weeks after index | 0 | 0.0% |
| Molnupiravir in the two weeks after index | 0 | 0.0% |
| Remdesivir in the two weeks after index | 0 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks after index | 0 | 0.0% |
| Casirivimab and Imdevimab in the two weeks after index | 0 | 0.0% |
| Nirmatrelvir/Ritonavir 15 to 30 days after index | 0 | 0.0% |
| Sotrovimab 15 to 30 days after index | 0 | 0.0% |
| Bebtelovimab 15 to 30 days after index | 0 | 0.0% |
| Molnupiravir 15 to 30 days after index | 0 | 0.0% |
| Remdesivir 15 to 30 days after index | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days after index | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days after index | 0 | 0.0% |

¹Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

²The Sentinel Common Data Model does not require outpatient dispensings to have a corresponding record in the Encounter table, therefore patient counts by encounter care setting may not sum to the total number of patients in the cohort.

*Potent CYP3A Inducers: apalutamide, carbamazepine, phenobarbital, phenytoin, rifampin, and St. John's wart.

**Other CYP3A inducers: efavirenz, nevirapine, rifabutin, betamethasone, budesonide, ciclesonide, dexamethasone, fluticasone, methylprednisolone, mometasone, prednisone, and triamcinolone.

***Drugs dependent on CYP3A for clearance: alfuzosin, pethidine, propoxyphene, ranolazine, amiodarone, dronedarone, flecainide, propafenone, quinidine, colchicine, lurasidone, pimozide, clozapine, dihydroergotamine, ergotamine, methylergonovine, lovastatin, simvastatin, sildenafil, triazolam, and oral midazolam.

****Other Drug/Drug Interactors: All other drugs in Table 1 of FDA's December 22, 2021 fact sheet.

Table 11. Aggregated Characteristics of Outpatient Remdesivir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| | | Outpatient Remdesivir | |
|---|--|-----------------------|--------------------|
| Patient Characteristics | | Number | |
| Unique patients | | 412 | |
| Demographic Characteristics | | Mean | Standard Deviation |
| Mean Age (Years) | | 67.1 | 15.8 |
| Age (Years) | | Number | Percent |
| 0-11 | | 1 | 0.2% |
| 12-17 | | 1 | 0.2% |
| 18-24 | | 3 | 0.7% |
| 25-34 | | 14 | 3.4% |
| 35-44 | | 22 | 5.3% |
| 45-54 | | 37 | 9.0% |
| 55-64 | | 80 | 19.4% |
| 65-74 | | 125 | 30.3% |
| 75-84 | | 86 | 20.9% |
| ≥ 85 | | 43 | 10.4% |
| Sex | | | |
| Female | | 205 | 49.8% |
| Male | | 207 | 50.2% |
| Race ¹ | | | |
| American Indian or Alaska Native | | 0 | 0.0% |
| Asian | | 8 | 1.9% |
| Black or African American | | 30 | 7.3% |
| Native Hawaiian or Other Pacific Islander | | 0 | 0.0% |
| Unknown | | 222 | 53.9% |
| White | | 152 | 36.9% |
| Hispanic origin | | | |
| Yes | | 21 | 5.1% |
| No | | 1 | 0.2% |
| Unknown | | 390 | 94.7% |
| Year | | | |
| 2021 | | 212 | 51.5% |
| 2022 | | 200 | 48.5% |
| Care Setting ² | | | |
| Outpatient Encounter | | 412 | 100.0% |
| Inpatient Encounter | | 7 | 1.7% |
| Emergency Department Encounter | | 210 | 51.0% |
| History of COVID-19 Diagnosis in Any Care Setting: | | | |
| COVID-19 diagnosis only on or anytime prior to index date | | 411 | 99.8% |
| No COVID-19 diagnosis on or anytime prior to index date | | 1 | 0.2% |
| COVID-19 on the same day as index date | | 411 | 99.8% |
| COVID-19 1-2 day prior to index date | | 142 | 34.5% |

Table 11. Aggregated Characteristics of Outpatient Remdesivir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| COVID-19 3-5 day prior to index date | 90 | 21.8% |
| COVID-19 6-7 days prior to index date | 54 | 13.1% |
| COVID-19 8-14 days prior to index date | 48 | 11.7% |
| COVID-19 15-30 days prior to index date | 24 | 5.8% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| | Number | Percent |
| COVID-19 > 30 days prior to index date | 22 | 5.3% |
| COVID-19 within 7 days after index date | 347 | 84.2% |
| COVID-19 8-14 days after index date | 108 | 26.2% |
| COVID-19 >14 days after index date | 70 | 17.0% |
| History of COVID-19 Diagnosis in the Inpatient Care Setting: | | |
| COVID-19 on the same day as index date | 7 | 1.7% |
| COVID-19 1-2 day prior to index date | 7 | 1.7% |
| COVID-19 3-5 day prior to index date | 21 | 5.1% |
| COVID-19 6-7 days prior to index date | 2 | 0.5% |
| COVID-19 8-14 days prior to index date | 5 | 1.2% |
| COVID-19 15-30 days prior to index date | 4 | 1.0% |
| COVID-19 > 30 days prior to index date | 9 | 2.2% |
| COVID-19 within 7 days after index date | 27 | 6.6% |
| COVID-19 8-14 days after index date | 4 | 1.0% |
| COVID-19 >14 days after index date | 0 | 0.0% |
| History of COVID-19 Diagnosis in the Outpatient Care Setting: | | |
| COVID-19 on the same day as index date | 411 | 99.8% |
| COVID-19 1-2 day prior to index date | 138 | 33.5% |
| COVID-19 3-5 day prior to index date | 80 | 19.4% |
| COVID-19 6-7 days prior to index date | 53 | 12.9% |
| COVID-19 8-14 days prior to index date | 46 | 11.2% |
| COVID-19 15-30 days prior to index date | 23 | 5.6% |
| COVID-19 > 30 days prior to index date | 19 | 4.6% |
| COVID-19 within 7 days after index date | 339 | 82.3% |
| COVID-19 8-14 days after index date | 107 | 26.0% |
| COVID-19 >14 days after index date | 70 | 17.0% |
| History of COVID-19 Diagnosis in the Five Days Prior: | | |
| COVID-19 diagnosis only within five-day EUA timeframe in any care setting | 411 | 99.8% |
| No COVID-19 diagnosis within five-day EUA timeframe in any care setting | 1 | 0.2% |
| Users with any outpatient visit within five-day EUA timeframe | 412 | 100.0% |
| Users with only non-ED outpatient visits within five-day EUA timeframe | 133 | 32.3% |
| Users with only ED visits within five-day EUA timeframe | 17 | 4.1% |
| History of COVID-19 Diagnosis in the Seven Days Prior: | | |
| COVID-19 diagnosis only within seven-day EUA timeframe in any care setting | 411 | 99.8% |
| No COVID-19 diagnosis within seven-day EUA timeframe in any care setting | 1 | 0.2% |
| Users with any outpatient visit within seven-day EUA timeframe | 412 | 100.0% |
| Users with only non-ED outpatient visits within seven-day EUA timeframe | 127 | 30.8% |

Table 11. Aggregated Characteristics of Outpatient Remdesivir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| Users with only ED visits within seven-day EUA timeframe | 16 | 3.9% |
| History of High Risk Conditions in the Prior Six Months: | | |
| High Risk criteria with conclusive evidence | 390 | 94.7% |
| High Risk criteria with suggestive evidence | 49 | 11.9% |
| High Risk criteria with mixed evidence | 306 | 74.3% |
| Obesity | 196 | 47.6% |
| Pregnancy | 7 | 1.7% |
| Chronic Kidney Disease | 103 | 25.0% |
| History of High Risk Conditions in the Prior Six Months: | | |
| | Number | Percent |
| Diabetes | 163 | 39.6% |
| Immunosuppressant Disease or Treatment | 222 | 53.9% |
| Cardiovascular (including Congenital Heart Disease) | 220 | 53.4% |
| Interstitial lung disease | 17 | 4.1% |
| Chronic Obstructive Pulmonary Disease (COPD) | 86 | 20.9% |
| Pulmonary Hypertension or Pulmonary Embolism | 29 | 7.0% |
| Dementia | 23 | 5.6% |
| Sickle Cell Disease | 1 | 0.2% |
| Bronchiectasis | 4 | 1.0% |
| Cancer | 62 | 15.0% |
| Cerebrovascular disease | 38 | 9.2% |
| Chronic liver disease | 38 | 9.2% |
| Cystic fibrosis | 2 | 0.5% |
| Human Immunodeficiency Virus (HIV) | 2 | 0.5% |
| Mental health conditions | 94 | 22.8% |
| Smoking current and former | 138 | 33.5% |
| Solid organ or blood stem cell transplantation | 0 | 0.0% |
| Tuberculosis | 0 | 0.0% |
| Congenital heart disease | 7 | 1.7% |
| Overweight | 32 | 7.8% |
| Substance use disorders | 15 | 3.6% |
| Thalassemia | 1 | 0.2% |
| Alpha 1 antitrypsin deficiency | 0 | 0.0% |
| Reactive airway and other respiratory diseases | 0 | 0.0% |
| Asthma | 52 | 12.6% |
| Hepatitis B | 1 | 0.2% |
| Hepatitis C | 1 | 0.2% |
| Hypertension | 296 | 71.8% |
| Recorded Use of Potent Cytochrome P450 3A4 (CYP3A) Drugs: | | |
| Potent CYP3A Inducers* in the prior three months | 0 | 0.0% |
| Potent CYP3A Inducers* in the prior month | 0 | 0.0% |
| Concomitant Potent CYP3A Inducers* | 0 | 0.0% |

Table 1I. Aggregated Characteristics of Outpatient Remdesivir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| Recorded Use of Other CYP3A Inducers: | | |
|--|---------------|----------------|
| Other CYP3A Inducers** in the prior three months | 138 | 33.5% |
| Other CYP3A Inducers** in the prior month | 96 | 23.3% |
| Concomitant Other CYP3A Inducers** | 123 | 29.9% |
| Recorded Use of Drugs Dependent on CYP3A for Clearance: | | |
| Drugs dependent on CYP3A for clearance*** in the prior three months | 32 | 7.8% |
| Drugs dependent on CYP3A for clearance*** in the prior month | 10 | 2.4% |
| Concomitant Drugs dependent on CYP3A for clearance*** | 26 | 6.3% |
| Recorded Use of Other Nirmatrelvir/Ritonavir Drug/Drug Interactors: | | |
| Other drug-drug interactors**** in the prior three months | 141 | 34.2% |
| Other drug-drug interactors**** in the prior month | 63 | 15.3% |
| Concomitant Other drug-drug interactors**** | 136 | 33.0% |
| Prior Use of Emergency Use Authorization (EUA) Agents: | | |
| | Number | Percent |
| Nirmatrelvir/Ritonavir in the two weeks prior | 0 | 0.0% |
| Sotrovimab in the two weeks prior | 0 | 0.0% |
| Bebtelovimab in the two weeks prior | 0 | 0.0% |
| Molnupiravir in the two weeks prior | 0 | 0.0% |
| Remdesivir in the two weeks prior | 34 | 8.3% |
| Bamlanivimab and Etesevimab in the two weeks prior | 3 | 0.7% |
| Casirivimab and Imdevimab in the two weeks prior | 7 | 1.7% |
| Nirmatrelvir/Ritonavir 15 to 30 days prior | 0 | 0.0% |
| Sotrovimab 15 to 30 days prior | 0 | 0.0% |
| Bebtelovimab 15 to 30 days prior | 0 | 0.0% |
| Molnupiravir 15 to 30 days prior | 0 | 0.0% |
| Remdesivir 15 to 30 days prior | 16 | 3.9% |
| Bamlanivimab and Etesevimab 15 to 30 days prior | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days prior | 0 | 0.0% |

Table 1. Aggregated Characteristics of Outpatient Remdesivir Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| Post-Index Use of EUA Agents: | | |
|--|-----|-------|
| Nirmatrelvir/Ritonavir in the two weeks after index | 0 | 0.0% |
| Sotrovimab in the two weeks after index | 1 | 0.2% |
| Bebtelovimab in the two weeks after index | 0 | 0.0% |
| Molnupiravir in the two weeks after index | 0 | 0.0% |
| Remdesivir in the two weeks after index | 152 | 36.9% |
| Bamlanivimab and Etesevimab in the two weeks after index | 0 | 0.0% |
| Casirivimab and Imdevimab in the two weeks after index | 3 | 0.7% |
| Nirmatrelvir/Ritonavir 15 to 30 days after index | 0 | 0.0% |
| Sotrovimab 15 to 30 days after index | 0 | 0.0% |
| Bebtelovimab 15 to 30 days after index | 0 | 0.0% |
| Molnupiravir 15 to 30 days after index | 0 | 0.0% |
| Remdesivir 15 to 30 days after index | 5 | 1.2% |
| Bamlanivimab and Etesevimab 15 to 30 days after index | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days after index | 0 | 0.0% |

¹Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

²The Sentinel Common Data Model does not require outpatient dispensings to have a corresponding record in the Encounter table, therefore patient counts by encounter care setting may not sum to the total number of patients in the cohort.

*Potent CYP3A Inducers: apalutamide, carbamazepine, phenobarbital, phenytoin, rifampin, and St. John's wart.

**Other CYP3A inducers: efavirenz, nevirapine, rifabutin, betamethasone, budesonide, ciclesonide, dexamethasone, fluticasone, methylprednisolone, mometasone, prednisone, and triamcinolone.

***Drugs dependent on CYP3A for clearance: alfuzosin, pethidine, propoxyphene, ranolazine, amiodarone, dronedarone, flecainide, propafenone, quinidine, colchicine, lurasidone, pimozide, clozapine, dihydroergotamine, ergotamine, methylergonovine, lovastatin, simvastatin, sildenafil, triazolam, and oral midazolam.

****Other Drug/Drug Interactors: All other drugs in Table 1 of FDA's December 22, 2021 fact sheet.

Table 1m. Aggregated Characteristics of Same Day Bamlanivimab and Etesevimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| Same day Bamlanivimab and Etesevimab | | |
|---|--------|--------------------|
| Patient Characteristics | Number | |
| Unique patients | 2,340 | |
| Demographic Characteristics | Mean | Standard Deviation |
| Mean Age (Years) | 58.0 | 16.5 |
| Age (Years) | Number | Percent |
| 0-11 | 2 | 0.1% |
| 12-17 | 12 | 0.5% |
| 18-24 | 58 | 2.5% |
| 25-34 | 172 | 7.4% |
| 35-44 | 305 | 13.0% |
| 45-54 | 394 | 16.8% |
| 55-64 | 513 | 21.9% |
| 65-74 | 533 | 22.8% |
| 75-84 | 264 | 11.3% |
| ≥ 85 | 87 | 3.7% |
| Sex | | |
| Female | 1,268 | 54.2% |
| Male | 1,072 | 45.8% |
| Race ¹ | | |
| American Indian or Alaska Native | 5 | 0.2% |
| Asian | 13 | 0.6% |
| Black or African American | 58 | 2.5% |
| Native Hawaiian or Other Pacific Islander | 0 | 0.0% |
| Unknown | 1,148 | 49.1% |
| White | 1,116 | 47.7% |
| Hispanic origin | | |
| Yes | 88 | 3.8% |
| No | 7 | 0.3% |
| Unknown | 2,245 | 95.9% |
| Year | | |
| 2021 | 1,600 | 68.4% |
| 2022 | 740 | 31.6% |
| Care Setting ² | | |
| Outpatient Encounter | 2,330 | 99.6% |
| Inpatient Encounter | 11 | 0.5% |
| Emergency Department Encounter | 594 | 25.4% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| COVID-19 diagnosis only on or anytime prior to index date | 2,219 | 94.8% |
| No COVID-19 diagnosis on or anytime prior to index date | 121 | 5.2% |
| COVID-19 on the same day as index date | 2,070 | 88.5% |
| COVID-19 1-2 day prior to index date | 646 | 27.6% |

Table 1m. Aggregated Characteristics of Same Day Bamlanivimab and Etesevimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| COVID-19 3-5 day prior to index date | 396 | 16.9% |
| COVID-19 6-7 days prior to index date | 97 | 4.1% |
| COVID-19 8-14 days prior to index date | 32 | 1.4% |
| COVID-19 15-30 days prior to index date | 16 | 0.7% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| | Number | Percent |
| COVID-19 > 30 days prior to index date | 179 | 7.6% |
| COVID-19 within 7 days after index date | 331 | 14.1% |
| COVID-19 8-14 days after index date | 145 | 6.2% |
| COVID-19 >14 days after index date | 78 | 3.3% |
| History of COVID-19 Diagnosis in the Inpatient Care Setting: | | |
| COVID-19 on the same day as index date | 14 | 0.6% |
| COVID-19 1-2 day prior to index date | 0 | 0.0% |
| COVID-19 3-5 day prior to index date | 2 | 0.1% |
| COVID-19 6-7 days prior to index date | 1 | 0.0% |
| COVID-19 8-14 days prior to index date | 3 | 0.1% |
| COVID-19 15-30 days prior to index date | 2 | 0.1% |
| COVID-19 > 30 days prior to index date | 16 | 0.7% |
| COVID-19 within 7 days after index date | 15 | 0.6% |
| COVID-19 8-14 days after index date | 4 | 0.2% |
| COVID-19 >14 days after index date | 2 | 0.1% |
| History of COVID-19 Diagnosis in the Outpatient Care Setting: | | |
| COVID-19 on the same day as index date | 2,056 | 87.9% |
| COVID-19 1-2 day prior to index date | 646 | 27.6% |
| COVID-19 3-5 day prior to index date | 396 | 16.9% |
| COVID-19 6-7 days prior to index date | 97 | 4.1% |
| COVID-19 8-14 days prior to index date | 30 | 1.3% |
| COVID-19 15-30 days prior to index date | 14 | 0.6% |
| COVID-19 > 30 days prior to index date | 176 | 7.5% |
| COVID-19 within 7 days after index date | 330 | 14.1% |
| COVID-19 8-14 days after index date | 143 | 6.1% |
| COVID-19 >14 days after index date | 77 | 3.3% |
| History of COVID-19 Diagnosis in the Five Days Prior: | | |
| COVID-19 diagnosis only within five-day EUA timeframe in any care setting | 2,193 | 93.7% |
| No COVID-19 diagnosis within five-day EUA timeframe in any care setting | 147 | 6.3% |
| Users with any outpatient visit within five-day EUA timeframe | 2,338 | 99.9% |
| Users with only non-ED outpatient visits within five-day EUA timeframe | 1,585 | 67.7% |
| Users with only ED visits within five-day EUA timeframe | 182 | 7.8% |
| History of COVID-19 Diagnosis in the Seven Days Prior: | | |
| COVID-19 diagnosis only within seven-day EUA timeframe in any care setting | 2,202 | 94.1% |
| No COVID-19 diagnosis within seven-day EUA timeframe in any care setting | 138 | 5.9% |
| Users with any outpatient visit within seven-day EUA timeframe | 2,339 | 100.0% |
| Users with only non-ED outpatient visits within seven-day EUA timeframe | 1,576 | 67.4% |

Table 1m. Aggregated Characteristics of Same Day Bamlanivimab and Etesevimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| Users with only ED visits within seven-day EUA timeframe | 161 | 6.9% |
| History of High Risk Conditions in the Prior Six Months: | | |
| High Risk criteria with conclusive evidence | 1,793 | 76.6% |
| High Risk criteria with suggestive evidence | 287 | 12.3% |
| High Risk criteria with mixed evidence | 1,242 | 53.1% |
| Obesity | 817 | 34.9% |
| Pregnancy | 23 | 1.0% |
| Chronic Kidney Disease | 237 | 10.1% |
| History of High Risk Conditions in the Prior Six Months: | | |
| | Number | Percent |
| Diabetes | 500 | 21.4% |
| Immunosuppressant Disease or Treatment | 886 | 37.9% |
| Cardiovascular (including Congenital Heart Disease) | 598 | 25.6% |
| Interstitial lung disease | 28 | 1.2% |
| Chronic Obstructive Pulmonary Disease (COPD) | 180 | 7.7% |
| Pulmonary Hypertension or Pulmonary Embolism | 25 | 1.1% |
| Dementia | 29 | 1.2% |
| Sickle Cell Disease | 5 | 0.2% |
| Bronchiectasis | 6 | 0.3% |
| Cancer | 190 | 8.1% |
| Cerebrovascular disease | 54 | 2.3% |
| Chronic liver disease | 112 | 4.8% |
| Cystic fibrosis | 10 | 0.4% |
| Human Immunodeficiency Virus (HIV) | 4 | 0.2% |
| Mental health conditions | 336 | 14.4% |
| Smoking current and former | 422 | 18.0% |
| Solid organ or blood stem cell transplantation | 2 | 0.1% |
| Tuberculosis | 1 | 0.0% |
| Congenital heart disease | 21 | 0.9% |
| Overweight | 237 | 10.1% |
| Substance use disorders | 48 | 2.1% |
| Thalassemia | 2 | 0.1% |
| Alpha 1 antitrypsin deficiency | 4 | 0.2% |
| Reactive airway and other respiratory diseases | 0 | 0.0% |
| Asthma | 243 | 10.4% |
| Hepatitis B | 1 | 0.0% |
| Hepatitis C | 4 | 0.2% |
| Hypertension | 1,113 | 47.6% |
| Recorded Use of Potent Cytochrome P450 3A4 (CYP3A) Drugs: | | |
| Potent CYP3A Inducers* in the prior three months | 2 | 0.1% |
| Potent CYP3A Inducers* in the prior month | 2 | 0.1% |
| Concomitant Potent CYP3A Inducers* | 2 | 0.1% |

Table 1m. Aggregated Characteristics of Same Day Bamlanivimab and Etesevimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| Recorded Use of Other CYP3A Inducers: | | |
|--|---------------|----------------|
| Other CYP3A Inducers** in the prior three months | 488 | 20.9% |
| Other CYP3A Inducers** in the prior month | 289 | 12.4% |
| Concomitant Other CYP3A Inducers** | 350 | 15.0% |
| Recorded Use of Drugs Dependent on CYP3A for Clearance: | | |
| Drugs dependent on CYP3A for clearance*** in the prior three months | 98 | 4.2% |
| Drugs dependent on CYP3A for clearance*** in the prior month | 42 | 1.8% |
| Concomitant Drugs dependent on CYP3A for clearance*** | 95 | 4.1% |
| Recorded Use of Other Nirmatrelvir/Ritonavir Drug/Drug Interactors: | | |
| Other drug-drug interactors**** in the prior three months | 495 | 21.2% |
| Other drug-drug interactors**** in the prior month | 252 | 10.8% |
| Concomitant Other drug-drug interactors**** | 484 | 20.7% |
| Prior Use of Emergency Use Authorization (EUA) Agents: | | |
| | Number | Percent |
| Nirmatrelvir/Ritonavir in the two weeks prior | 0 | 0.0% |
| Sotrovimab in the two weeks prior | 1 | 0.0% |
| Bebtelovimab in the two weeks prior | 0 | 0.0% |
| Molnupiravir in the two weeks prior | 0 | 0.0% |
| Remdesivir in the two weeks prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks prior | 5 | 0.2% |
| Casirivimab and Imdevimab in the two weeks prior | 1 | 0.0% |
| Nirmatrelvir/Ritonavir 15 to 30 days prior | 0 | 0.0% |
| Sotrovimab 15 to 30 days prior | 0 | 0.0% |
| Bebtelovimab 15 to 30 days prior | 0 | 0.0% |
| Molnupiravir 15 to 30 days prior | 0 | 0.0% |
| Remdesivir 15 to 30 days prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days prior | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days prior | 0 | 0.0% |

Table 1m. Aggregated Characteristics of Same Day Bamlanivimab and Etesevimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| Post-Index Use of EUA Agents: | | |
|--|---|------|
| Nirmatrelvir/Ritonavir in the two weeks after index | 0 | 0.0% |
| Sotrovimab in the two weeks after index | 0 | 0.0% |
| Bebtelovimab in the two weeks after index | 0 | 0.0% |
| Molnupiravir in the two weeks after index | 0 | 0.0% |
| Remdesivir in the two weeks after index | 2 | 0.1% |
| Bamlanivimab and Etesevimab in the two weeks after index | 6 | 0.3% |
| Casirivimab and Imdevimab in the two weeks after index | 1 | 0.0% |
| Nirmatrelvir/Ritonavir 15 to 30 days after index | 0 | 0.0% |
| Sotrovimab 15 to 30 days after index | 0 | 0.0% |
| Bebtelovimab 15 to 30 days after index | 0 | 0.0% |
| Molnupiravir 15 to 30 days after index | 1 | 0.0% |
| Remdesivir 15 to 30 days after index | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days after index | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days after index | 0 | 0.0% |

¹Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

²The Sentinel Common Data Model does not require outpatient dispensings to have a corresponding record in the Encounter table, therefore patient counts by encounter care setting may not sum to the total number of patients in the cohort.

*Potent CYP3A Inducers: apalutamide, carbamazepine, phenobarbital, phenytoin, rifampin, and St. John's wart.

**Other CYP3A inducers: efavirenz, nevirapine, rifabutin, betamethasone, budesonide, ciclesonide, dexamethasone, fluticasone, methylprednisolone, mometasone, prednisone, and triamcinolone.

***Drugs dependent on CYP3A for clearance: alfuzosin, pethidine, propoxyphene, ranolazine, amiodarone, dronedarone, flecainide, propafenone, quinidine, colchicine, lurasidone, pimozide, clozapine, dihydroergotamine, ergotamine, methylergonovine, lovastatin, simvastatin, sildenafil, triazolam, and oral midazolam.

****Other Drug/Drug Interactors: All other drugs in Table 1 of FDA's December 22, 2021 fact sheet.

Table 1n. Aggregated Characteristics of Casirivimab or Imdevimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| | | Casirivimab or Imdevimab | |
|---|--|--------------------------|--------------------|
| Patient Characteristics | | Number | |
| Unique patients | | 5,174 | |
| Demographic Characteristics | | Mean | Standard Deviation |
| Mean Age (Years) | | 56.4 | 16.6 |
| Age (Years) | | Number | Percent |
| 0-11 | | 3 | 0.1% |
| 12-17 | | 36 | 0.7% |
| 18-24 | | 155 | 3.0% |
| 25-34 | | 403 | 7.8% |
| 35-44 | | 740 | 14.3% |
| 45-54 | | 985 | 19.0% |
| 55-64 | | 1,123 | 21.7% |
| 65-74 | | 1,022 | 19.8% |
| 75-84 | | 569 | 11.0% |
| ≥ 85 | | 138 | 2.7% |
| Sex | | | |
| Female | | 2,939 | 56.8% |
| Male | | 2,235 | 43.2% |
| Race ¹ | | | |
| American Indian or Alaska Native | | 17 | 0.3% |
| Asian | | 68 | 1.3% |
| Black or African American | | 207 | 4.0% |
| Native Hawaiian or Other Pacific Islander | | 6 | 0.1% |
| Unknown | | 2,596 | 50.2% |
| White | | 2,280 | 44.1% |
| Hispanic origin | | | |
| Yes | | 317 | 6.1% |
| No | | 20 | 0.4% |
| Unknown | | 4,837 | 93.5% |
| Year | | | |
| 2021 | | 3,084 | 59.6% |
| 2022 | | 2,090 | 40.4% |
| Care Setting ² | | | |
| Outpatient Encounter | | 5,164 | 99.8% |
| Inpatient Encounter | | 24 | 0.5% |
| Emergency Department Encounter | | 894 | 17.3% |
| History of COVID-19 Diagnosis in Any Care Setting: | | | |
| COVID-19 diagnosis only on or anytime prior to index date | | 4,855 | 93.8% |
| No COVID-19 diagnosis on or anytime prior to index date | | 319 | 6.2% |
| COVID-19 on the same day as index date | | 4,532 | 87.6% |
| COVID-19 1-2 day prior to index date | | 1,358 | 26.2% |

Table 1n. Aggregated Characteristics of Casirivimab or Imdevimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| COVID-19 3-5 day prior to index date | 768 | 14.8% |
| COVID-19 6-7 days prior to index date | 197 | 3.8% |
| COVID-19 8-14 days prior to index date | 94 | 1.8% |
| COVID-19 15-30 days prior to index date | 25 | 0.5% |
| History of COVID-19 Diagnosis in Any Care Setting: | | |
| | Number | Percent |
| COVID-19 > 30 days prior to index date | 375 | 7.2% |
| COVID-19 within 7 days after index date | 709 | 13.7% |
| COVID-19 8-14 days after index date | 283 | 5.5% |
| COVID-19 >14 days after index date | 144 | 2.8% |
| History of COVID-19 Diagnosis in the Inpatient Care Setting: | | |
| COVID-19 on the same day as index date | 25 | 0.5% |
| COVID-19 1-2 day prior to index date | 0 | 0.0% |
| COVID-19 3-5 day prior to index date | 6 | 0.1% |
| COVID-19 6-7 days prior to index date | 3 | 0.1% |
| COVID-19 8-14 days prior to index date | 1 | 0.0% |
| COVID-19 15-30 days prior to index date | 1 | 0.0% |
| COVID-19 > 30 days prior to index date | 37 | 0.7% |
| COVID-19 within 7 days after index date | 39 | 0.8% |
| COVID-19 8-14 days after index date | 5 | 0.1% |
| COVID-19 >14 days after index date | 0 | 0.0% |
| History of COVID-19 Diagnosis in the Outpatient Care Setting: | | |
| COVID-19 on the same day as index date | 4,518 | 87.3% |
| COVID-19 1-2 day prior to index date | 1,358 | 26.2% |
| COVID-19 3-5 day prior to index date | 767 | 14.8% |
| COVID-19 6-7 days prior to index date | 196 | 3.8% |
| COVID-19 8-14 days prior to index date | 93 | 1.8% |
| COVID-19 15-30 days prior to index date | 25 | 0.5% |
| COVID-19 > 30 days prior to index date | 374 | 7.2% |
| COVID-19 within 7 days after index date | 694 | 13.4% |
| COVID-19 8-14 days after index date | 283 | 5.5% |
| COVID-19 >14 days after index date | 144 | 2.8% |
| History of COVID-19 Diagnosis in the Five Days Prior: | | |
| COVID-19 diagnosis only within five-day EUA timeframe in any care setting | 4,797 | 92.7% |
| No COVID-19 diagnosis within five-day EUA timeframe in any care setting | 377 | 7.3% |
| Users with any outpatient visit within five-day EUA timeframe | 5,174 | 100.0% |
| Users with only non-ED outpatient visits within five-day EUA timeframe | 3,975 | 76.8% |
| Users with only ED visits within five-day EUA timeframe | 325 | 6.3% |
| History of COVID-19 Diagnosis in the Seven Days Prior: | | |
| COVID-19 diagnosis only within seven-day EUA timeframe in any care setting | 4,810 | 93.0% |
| No COVID-19 diagnosis within seven-day EUA timeframe in any care setting | 364 | 7.0% |
| Users with any outpatient visit within seven-day EUA timeframe | 5,174 | 100.0% |
| Users with only non-ED outpatient visits within seven-day EUA timeframe | 3,951 | 76.4% |

Table 1n. Aggregated Characteristics of Casirivimab or Imdevimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| | | |
|--|---------------|----------------|
| Users with only ED visits within seven-day EUA timeframe | 295 | 5.7% |
| History of High Risk Conditions in the Prior Six Months: | | |
| High Risk criteria with conclusive evidence | 3,839 | 74.2% |
| High Risk criteria with suggestive evidence | 565 | 10.9% |
| High Risk criteria with mixed evidence | 2,670 | 51.6% |
| Obesity | 1,775 | 34.3% |
| Pregnancy | 80 | 1.5% |
| Chronic Kidney Disease | 504 | 9.7% |
| History of High Risk Conditions in the Prior Six Months: | | |
| | Number | Percent |
| Diabetes | 1,064 | 20.6% |
| Immunosuppressant Disease or Treatment | 2,000 | 38.7% |
| Cardiovascular (including Congenital Heart Disease) | 1,152 | 22.3% |
| Interstitial lung disease | 64 | 1.2% |
| Chronic Obstructive Pulmonary Disease (COPD) | 261 | 5.0% |
| Pulmonary Hypertension or Pulmonary Embolism | 41 | 0.8% |
| Dementia | 67 | 1.3% |
| Sickle Cell Disease | 4 | 0.1% |
| Bronchiectasis | 22 | 0.4% |
| Cancer | 367 | 7.1% |
| Cerebrovascular disease | 125 | 2.4% |
| Chronic liver disease | 263 | 5.1% |
| Cystic fibrosis | 10 | 0.2% |
| Human Immunodeficiency Virus (HIV) | 19 | 0.4% |
| Mental health conditions | 679 | 13.1% |
| Smoking current and former | 698 | 13.5% |
| Solid organ or blood stem cell transplantation | 1 | 0.0% |
| Tuberculosis | 1 | 0.0% |
| Congenital heart disease | 36 | 0.7% |
| Overweight | 493 | 9.5% |
| Substance use disorders | 73 | 1.4% |
| Thalassemia | 7 | 0.1% |
| Alpha 1 antitrypsin deficiency | 3 | 0.1% |
| Reactive airway and other respiratory diseases | 5 | 0.1% |
| Asthma | 524 | 10.1% |
| Hepatitis B | 7 | 0.1% |
| Hepatitis C | 15 | 0.3% |
| Hypertension | 2,382 | 46.0% |
| Recorded Use of Potent Cytochrome P450 3A4 (CYP3A) Drugs: | | |
| Potent CYP3A Inducers* in the prior three months | 3 | 0.1% |
| Potent CYP3A Inducers* in the prior month | 1 | 0.0% |
| Concomitant Potent CYP3A Inducers* | 2 | 0.0% |

Table 1n. Aggregated Characteristics of Casirivimab or Imdevimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| Recorded Use of Other CYP3A Inducers: | | |
|--|---------------|----------------|
| Other CYP3A Inducers** in the prior three months | 1,084 | 21.0% |
| Other CYP3A Inducers** in the prior month | 658 | 12.7% |
| Concomitant Other CYP3A Inducers** | 734 | 14.2% |
| Recorded Use of Drugs Dependent on CYP3A for Clearance: | | |
| Drugs dependent on CYP3A for clearance*** in the prior three months | 186 | 3.6% |
| Drugs dependent on CYP3A for clearance*** in the prior month | 75 | 1.4% |
| Concomitant Drugs dependent on CYP3A for clearance*** | 172 | 3.3% |
| Recorded Use of Other Nirmatrelvir/Ritonavir Drug/Drug Interactors: | | |
| Other drug-drug interactors**** in the prior three months | 1,097 | 21.2% |
| Other drug-drug interactors**** in the prior month | 602 | 11.6% |
| Concomitant Other drug-drug interactors**** | 1,053 | 20.4% |
| Prior Use of Emergency Use Authorization (EUA) Agents: | | |
| | Number | Percent |
| Nirmatrelvir/Ritonavir in the two weeks prior | 2 | 0.0% |
| Sotrovimab in the two weeks prior | 0 | 0.0% |
| Bebtelovimab in the two weeks prior | 0 | 0.0% |
| Molnupiravir in the two weeks prior | 0 | 0.0% |
| Remdesivir in the two weeks prior | 2 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks prior | 1 | 0.0% |
| Casirivimab and Imdevimab in the two weeks prior | 1 | 0.0% |
| Nirmatrelvir/Ritonavir 15 to 30 days prior | 0 | 0.0% |
| Sotrovimab 15 to 30 days prior | 0 | 0.0% |
| Bebtelovimab 15 to 30 days prior | 0 | 0.0% |
| Molnupiravir 15 to 30 days prior | 0 | 0.0% |
| Remdesivir 15 to 30 days prior | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days prior | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days prior | 1 | 0.0% |

Table 1n. Aggregated Characteristics of Casirivimab or Imdevimab Users in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022 at Data Partners without Care Setting Associated Lab Tests

| Post-Index Use of EUA Agents: | | |
|--|----|------|
| Nirmatrelvir/Ritonavir in the two weeks after index | 1 | 0.0% |
| Sotrovimab in the two weeks after index | 1 | 0.0% |
| Bebtelovimab in the two weeks after index | 0 | 0.0% |
| Molnupiravir in the two weeks after index | 0 | 0.0% |
| Remdesivir in the two weeks after index | 2 | 0.0% |
| Bamlanivimab and Etesevimab in the two weeks after index | 0 | 0.0% |
| Casirivimab and Imdevimab in the two weeks after index | 12 | 0.2% |
| Nirmatrelvir/Ritonavir 15 to 30 days after index | 0 | 0.0% |
| Sotrovimab 15 to 30 days after index | 0 | 0.0% |
| Bebtelovimab 15 to 30 days after index | 0 | 0.0% |
| Molnupiravir 15 to 30 days after index | 0 | 0.0% |
| Remdesivir 15 to 30 days after index | 0 | 0.0% |
| Bamlanivimab and Etesevimab 15 to 30 days after index | 0 | 0.0% |
| Casirivimab and Imdevimab 15 to 30 days after index | 4 | 0.1% |

¹Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete.

²The Sentinel Common Data Model does not require outpatient dispensings to have a corresponding record in the Encounter table, therefore patient counts by encounter care setting may not sum to the total number of patients in the cohort.

*Potent CYP3A Inducers: apalutamide, carbamazepine, phenobarbital, phenytoin, rifampin, and St. John's wart.

**Other CYP3A inducers: efavirenz, nevirapine, rifabutin, betamethasone, budesonide, ciclesonide, dexamethasone, fluticasone, methylprednisolone, mometasone, prednisone, and triamcinolone.

***Drugs dependent on CYP3A for clearance: alfuzosin, pethidine, propoxyphene, ranolazine, amiodarone, dronedarone, flecainide, propafenone, quinidine, colchicine, lurasidone, pimozide, clozapine, dihydroergotamine, ergotamine, methylergonovine, lovastatin, simvastatin, sildenafil, triazolam, and oral midazolam.

****Other Drug/Drug Interactors: All other drugs in Table 1 of FDA's December 22, 2021 fact sheet.

Table 2. Summary of Exposures of Interest in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022

| | Number of Patients | Number of Index Dates | Number of Eligible Members ¹ | Number of Exposed Members per 10,000 Eligible Members | Total Eligible Member-Years ¹ |
|--------------------------------------|--------------------|-----------------------|---|---|--|
| Nirmatrelvir/Ritonavir | 2,846 | 2,846 | 14,105,895 | 2.02 | 2,393,639.2 |
| Sotrovimab | 9,484 | 9,484 | 24,592,404 | 3.86 | 3,509,669.1 |
| Bebtelovimab | 17 | 17 | 24,592,404 | 0.01 | 3,510,869.3 |
| Molnupiravir | 3,433 | 3,433 | 14,105,895 | 2.43 | 2,393,512.6 |
| Outpatient Remdesivir | 551 | 551 | 24,592,404 | 0.22 | 3,510,814.8 |
| Same Day Bamlanivimab and Etesevimab | 3,712 | 3,712 | 24,592,404 | 1.51 | 3,510,364.3 |
| Casirivimab or Imdevimab | 8,549 | 8,549 | 24,592,404 | 3.48 | 3,509,739.8 |

¹Eligible Members and Member-Years are reflective of the number of patients that met all cohort entry criteria on at least one day during the query period.

Table 3. Summary of Exposures of Interest in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022, by Age Group

| Age (Years) | Number of Patients | Number of Index Dates | Number of Eligible Members ¹ | Number of Exposed Members per 10,000 Eligible Members | Total Eligible Member-Years ¹ |
|-------------------------------|--------------------|-----------------------|---|---|--|
| Nirmatrelvir/Ritonavir | | | | | |
| 0-11 | 0 | 0 | 949,390 | 0.00 | 127,724.7 |
| 12-17 | 8 | 8 | 585,366 | 0.14 | 80,329.3 |
| 18-24 | 21 | 21 | 848,124 | 0.25 | 103,290.7 |
| 25-34 | 54 | 54 | 1,302,607 | 0.41 | 166,534.4 |
| 35-44 | 138 | 138 | 1,339,404 | 1.03 | 188,924.7 |
| 45-54 | 254 | 254 | 1,390,834 | 1.83 | 208,972.2 |
| 55-64 | 435 | 435 | 1,767,736 | 2.46 | 292,688.2 |
| 65-74 | 1,080 | 1,080 | 3,562,069 | 3.03 | 698,782.1 |
| 75-84 | 662 | 662 | 1,981,272 | 3.34 | 405,093.7 |
| ≥ 85 | 194 | 194 | 599,284 | 3.24 | 121,299.1 |
| Sotrovimab | | | | | |
| 0-11 | 2 | 2 | 2,228,185 | 0.01 | 264,843.5 |
| 12-17 | 28 | 28 | 1,412,657 | 0.20 | 167,646.2 |
| 18-24 | 74 | 74 | 1,969,151 | 0.38 | 217,439.9 |
| 25-34 | 305 | 305 | 2,663,652 | 1.15 | 306,423.8 |
| 35-44 | 567 | 567 | 2,860,909 | 1.98 | 349,387.2 |
| 45-54 | 845 | 845 | 2,891,330 | 2.92 | 368,082.4 |
| 55-64 | 1,500 | 1,500 | 3,281,078 | 4.57 | 452,496.8 |
| 65-74 | 3,145 | 3,145 | 4,395,121 | 7.16 | 787,612.8 |
| 75-84 | 2,274 | 2,274 | 2,427,725 | 9.37 | 453,579.7 |
| ≥ 85 | 744 | 744 | 790,983 | 9.41 | 142,156.9 |
| Bebtelovimab | | | | | |
| 0-11 | 0 | 0 | 2,228,185 | 0.00 | 264,843.6 |
| 12-17 | 0 | 0 | 1,412,657 | 0.00 | 167,648.2 |
| 18-24 | 0 | 0 | 1,969,153 | 0.00 | 217,446.8 |
| 25-34 | 0 | 0 | 2,663,653 | 0.00 | 306,450.8 |
| 35-44 | 4 | 4 | 2,860,912 | 0.01 | 349,438.3 |
| 45-54 | 2 | 2 | 2,891,336 | 0.01 | 368,166.7 |
| 55-64 | 0 | 0 | 3,281,089 | 0.00 | 452,669.6 |

Table 3. Summary of Exposures of Interest in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022, by Age Group

| Age (Years) | Number of Patients | Number of Index Dates | Number of Eligible Members ¹ | Number of Exposed Members per 10,000 Eligible Members | Total Eligible Member-Years ¹ |
|---|--------------------|-----------------------|---|---|--|
| 65-74 | 7 | 7 | 4,395,143 | 0.02 | 788,039.1 |
| 75-84 | 3 | 3 | 2,427,791 | 0.01 | 453,903.3 |
| ≥ 85 | 1 | 1 | 791,002 | 0.01 | 142,262.9 |
| Molnupiravir | | | | | |
| 0-11 | 0 | 0 | 949,390 | 0.00 | 127,724.7 |
| 12-17 | 0 | 0 | 585,366 | 0.00 | 80,329.7 |
| 18-24 | 18 | 18 | 848,125 | 0.21 | 103,291.0 |
| 25-34 | 53 | 53 | 1,302,607 | 0.41 | 166,534.0 |
| 35-44 | 140 | 140 | 1,339,406 | 1.05 | 188,922.2 |
| 45-54 | 250 | 250 | 1,390,832 | 1.80 | 208,969.4 |
| 55-64 | 532 | 532 | 1,767,736 | 3.01 | 292,670.9 |
| 65-74 | 1,269 | 1,269 | 3,562,065 | 3.56 | 698,738.7 |
| 75-84 | 868 | 868 | 1,981,258 | 4.38 | 405,051.9 |
| ≥ 85 | 303 | 303 | 599,279 | 5.06 | 121,280.2 |
| Outpatient Remdesivir | | | | | |
| 0-11 | 1 | 1 | 2,228,185 | 0.00 | 264,843.5 |
| 12-17 | 1 | 1 | 1,412,657 | 0.01 | 167,648.1 |
| 18-24 | 3 | 3 | 1,969,153 | 0.02 | 217,446.6 |
| 25-34 | 20 | 20 | 2,663,653 | 0.08 | 306,448.8 |
| 35-44 | 33 | 33 | 2,860,911 | 0.12 | 349,434.4 |
| 45-54 | 53 | 53 | 2,891,336 | 0.18 | 368,161.3 |
| 55-64 | 105 | 105 | 3,281,089 | 0.32 | 452,659.5 |
| 65-74 | 157 | 157 | 4,395,140 | 0.36 | 788,024.4 |
| 75-84 | 123 | 123 | 2,427,788 | 0.51 | 453,890.2 |
| ≥ 85 | 55 | 55 | 791,002 | 0.70 | 142,257.9 |
| Same Day Bamlanivimab and Etesevimab | | | | | |
| 0-11 | 5 | 5 | 2,228,185 | 0.02 | 264,842.6 |
| 12-17 | 15 | 15 | 1,412,657 | 0.11 | 167,646.4 |
| 18-24 | 75 | 75 | 1,969,153 | 0.38 | 217,437.5 |

Table 3. Summary of Exposures of Interest in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022, by Age Group

| Age (Years) | Number of Patients | Number of Index Dates | Number of Eligible Members ¹ | Number of Exposed Members per 10,000 Eligible Members | Total Eligible Member-Years ¹ |
|---------------------------------|--------------------|-----------------------|---|---|--|
| 25-34 | 216 | 216 | 2,663,650 | 0.81 | 306,425.3 |
| 35-44 | 367 | 367 | 2,860,910 | 1.28 | 349,396.4 |
| 45-54 | 522 | 522 | 2,891,330 | 1.81 | 368,105.4 |
| 55-64 | 738 | 738 | 3,281,085 | 2.25 | 452,576.0 |
| 65-74 | 1,052 | 1,052 | 4,395,131 | 2.39 | 787,881.2 |
| 75-84 | 568 | 568 | 2,427,778 | 2.34 | 453,812.6 |
| ≥ 85 | 154 | 154 | 790,997 | 1.95 | 142,240.7 |
| Casirivimab or Imdevimab | | | | | |
| 0-11 | 3 | 3 | 2,228,185 | 0.01 | 264,843.4 |
| 12-17 | 40 | 40 | 1,412,657 | 0.28 | 167,644.9 |
| 18-24 | 172 | 172 | 1,969,150 | 0.87 | 217,430.3 |
| 25-34 | 458 | 458 | 2,663,649 | 1.72 | 306,405.4 |
| 35-44 | 861 | 861 | 2,860,910 | 3.01 | 349,353.6 |
| 45-54 | 1,219 | 1,219 | 2,891,326 | 4.22 | 368,036.5 |
| 55-64 | 1,591 | 1,591 | 3,281,078 | 4.85 | 452,482.1 |
| 65-74 | 2,381 | 2,381 | 4,395,121 | 5.42 | 787,671.9 |
| 75-84 | 1,427 | 1,427 | 2,427,748 | 5.88 | 453,674.2 |
| ≥ 85 | 397 | 397 | 790,990 | 5.02 | 142,197.5 |

¹Eligible Members and Member-Years are reflective of the number of patients that met all cohort entry criteria on at least one day during the query period.

Table 4. Summary of Exposures of Interest in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022, by Year and Month

| | Number of Patients | Number of Index Dates | Number of Eligible Members ¹ | Number of Exposed Members per 10,000 Eligible Members | Total Eligible Member-Years ¹ |
|-------------------------------|--------------------|-----------------------|---|---|--|
| Nirmatrelvir/Ritonavir | | | | | |
| <i>2021</i> | | | | | |
| December | 18 | 18 | 13,708,774 | 0.013 | 368,848.9 |
| <i>2022</i> | | | | | |
| January | 1,555 | 1,555 | 12,715,762 | 1.223 | 1,052,324.1 |
| February | 804 | 804 | 5,548,068 | 1.449 | 424,796.4 |
| March | 406 | 406 | 5,545,980 | 0.732 | 469,836.7 |
| April | 56 | 56 | 522,129 | 1.073 | 42,483.9 |
| May | 7 | 7 | 520,420 | 0.135 | 35,349.2 |
| June | 0 | 0 | 0 | - | 0.0 |
| Sotrovimab | | | | | |
| <i>2021</i> | | | | | |
| December | 887 | 887 | 24,046,502 | 0.369 | 647,993.9 |
| <i>2022</i> | | | | | |
| January | 6,068 | 6,068 | 22,422,704 | 2.706 | 1,863,924.0 |
| February | 2,063 | 2,063 | 5,704,943 | 3.616 | 436,751.3 |
| March | 462 | 462 | 5,702,048 | 0.810 | 483,040.8 |
| April | 4 | 4 | 522,911 | 0.076 | 42,547.5 |
| May | 0 | 0 | 521,355 | 0.000 | 35,411.7 |
| June | 0 | 0 | 0 | - | 0.0 |
| Bebtelovimab | | | | | |
| <i>2021</i> | | | | | |
| December | 0 | 0 | 24,046,502 | 0.000 | 648,001.4 |
| <i>2022</i> | | | | | |
| January | 0 | 0 | 22,423,541 | 0.000 | 1,864,261.9 |
| February | 7 | 7 | 5,708,349 | 0.012 | 437,105.0 |
| March | 3 | 3 | 5,707,425 | 0.005 | 483,523.9 |
| April | 7 | 7 | 523,032 | 0.134 | 42,557.4 |
| May | 0 | 0 | 521,472 | 0.000 | 35,419.7 |

Table 4. Summary of Exposures of Interest in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022, by Year and Month

| | Number of Patients | Number of Index Dates | Number of Eligible Members ¹ | Number of Exposed Members per 10,000 Eligible Members | Total Eligible Member-Years ¹ |
|---|--------------------|-----------------------|---|---|--|
| June | 0 | 0 | 0 | - | 0.0 |
| Molnupiravir | | | | | |
| <i>2021</i> | | | | | |
| December | 0 | 0 | 13,708,774 | 0.000 | 368,848.9 |
| <i>2022</i> | | | | | |
| January | 2,246 | 2,246 | 12,715,778 | 1.766 | 1,052,311.3 |
| February | 977 | 977 | 5,547,428 | 1.761 | 424,738.0 |
| March | 162 | 162 | 5,545,190 | 0.292 | 469,777.9 |
| April | 44 | 44 | 522,143 | 0.843 | 42,485.3 |
| May | 4 | 4 | 520,446 | 0.077 | 35,351.2 |
| June | 0 | 0 | 0 | - | 0.0 |
| Outpatient Remdesivir | | | | | |
| <i>2021</i> | | | | | |
| December | 219 | 219 | 24,046,502 | 0.091 | 647,998.7 |
| <i>2022</i> | | | | | |
| January | 291 | 291 | 22,423,352 | 0.130 | 1,864,230.0 |
| February | 37 | 37 | 5,708,255 | 0.065 | 437,096.2 |
| March | 4 | 4 | 5,707,304 | 0.007 | 483,513.6 |
| April | 0 | 0 | 523,022 | 0.000 | 42,556.8 |
| May | 0 | 0 | 521,469 | 0.000 | 35,419.5 |
| June | 0 | 0 | 0 | - | 0.0 |
| Same Day Bamlanivimab and Etesevimab | | | | | |
| <i>2021</i> | | | | | |
| December | 1,806 | 1,806 | 24,046,502 | 0.751 | 647,976.4 |
| <i>2022</i> | | | | | |
| January | 1,897 | 1,897 | 22,421,831 | 0.846 | 1,864,003.0 |
| February | 7 | 7 | 5,707,017 | 0.012 | 437,002.8 |

Table 4. Summary of Exposures of Interest in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022, by Year and Month

| | Number of Patients | Number of Index Dates | Number of Eligible Members ¹ | Number of Exposed Members per 10,000 Eligible Members | Total Eligible Member-Years ¹ |
|---------------------------------|--------------------|-----------------------|---|---|--|
| March | 2 | 2 | 5,706,115 | 0.004 | 483,412.9 |
| April | 0 | 0 | 522,975 | 0.000 | 42,552.9 |
| May | 0 | 0 | 521,422 | 0.000 | 35,416.3 |
| June | 0 | 0 | 0 | - | 0.0 |
| Casirivimab or Imdevimab | | | | | |
| <i>2021</i> | | | | | |
| December | 3,442 | 3,442 | 24,046,502 | 1.431 | 647,954.3 |
| <i>2022</i> | | | | | |
| January | 4,998 | 4,998 | 22,420,330 | 2.229 | 1,863,706.4 |
| February | 98 | 98 | 5,705,166 | 0.172 | 436,856.5 |
| March | 11 | 11 | 5,704,198 | 0.019 | 483,249.7 |
| April | 0 | 0 | 523,000 | 0.000 | 42,555.0 |
| May | 0 | 0 | 521,447 | 0.000 | 35,418.0 |
| June | 0 | 0 | 0 | - | 0.0 |

¹Eligible Members and Member-Years are reflective of the number of patients that met all cohort entry criteria on at least one day during the query period.

Table 5. Summary of Exposures of Interest in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022, by Health and Human Services (HHS) Region

| | Number of Patients | Number of Index Dates | Number of Eligible Members ¹ | Number of Exposed Members per 10,000 Eligible Members | Total Eligible Member-Years ¹ |
|-------------------------------|--------------------|-----------------------|---|---|--|
| Nirmatrelvir/Ritonavir | | | | | |
| HHS Region (01) | 27 | 27 | 422,443 | 0.639 | 46,023.8 |
| HHS Region (02) | 88 | 88 | 1,050,239 | 0.838 | 120,131.8 |
| HHS Region (03) | 295 | 295 | 1,416,127 | 2.083 | 189,282.8 |
| HHS Region (04) | 1,007 | 1,007 | 3,413,725 | 2.950 | 656,847.4 |
| HHS Region (05) | 318 | 318 | 2,419,208 | 1.314 | 365,032.5 |
| HHS Region (06) | 673 | 673 | 1,631,111 | 4.126 | 282,707.6 |
| HHS Region (07) | 86 | 86 | 566,013 | 1.519 | 79,374.0 |
| HHS Region (08) | 133 | 133 | 905,690 | 1.468 | 275,132.1 |
| HHS Region (09) | 79 | 79 | 1,252,010 | 0.631 | 166,637.0 |
| HHS Region (10) | 137 | 137 | 922,761 | 1.485 | 200,137.0 |
| HHS Region (11) | 0 | 0 | 7,081 | 0.000 | 777.4 |
| HHS Region (Invalid) | 2 | 2 | 13,146 | 1.521 | 1,727.6 |
| HHS Region (Missing) | 1 | 1 | 86,341 | 0.116 | 9,828.1 |
| HHS Region (Other) | 0 | 0 | 0 | - | 0.0 |
| Sotrovimab | | | | | |
| HHS Region (01) | 209 | 209 | 753,977 | 2.772 | 80,102.4 |
| HHS Region (02) | 928 | 928 | 2,414,255 | 3.844 | 265,959.1 |
| HHS Region (03) | 1,177 | 1,177 | 2,707,768 | 4.347 | 325,436.8 |
| HHS Region (04) | 2,867 | 2,867 | 5,139,958 | 5.578 | 862,162.0 |
| HHS Region (05) | 1,844 | 1,844 | 4,834,450 | 3.814 | 603,198.5 |
| HHS Region (06) | 1,113 | 1,113 | 2,557,828 | 4.351 | 381,362.1 |
| HHS Region (07) | 360 | 360 | 830,446 | 4.335 | 105,986.5 |
| HHS Region (08) | 345 | 345 | 1,104,914 | 3.122 | 295,847.8 |
| HHS Region (09) | 478 | 478 | 2,080,995 | 2.297 | 254,710.1 |
| HHS Region (10) | 160 | 160 | 1,327,467 | 1.205 | 243,277.1 |
| HHS Region (11) | 0 | 0 | 7,093 | 0.000 | 778.6 |
| HHS Region (Invalid) | 1 | 1 | 48,459 | 0.206 | 5,565.8 |

Table 5. Summary of Exposures of Interest in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022, by Health and Human Services (HHS) Region

| | Number of Patients | Number of Index Dates | Number of Eligible Members ¹ | Number of Exposed Members per 10,000 Eligible Members | Total Eligible Member-Years ¹ |
|----------------------|--------------------|-----------------------|---|---|--|
| HHS Region (Missing) | 2 | 2 | 784,794 | 0.025 | 85,282.3 |
| HHS Region (Other) | 0 | 0 | 0 | - | 0.0 |
| Bebtelovimab | | | | | |
| HHS Region (01) | 0 | 0 | 753,977 | 0.000 | 80,118.7 |
| HHS Region (02) | 0 | 0 | 2,414,255 | 0.000 | 266,034.0 |
| HHS Region (03) | 0 | 0 | 2,707,768 | 0.000 | 325,556.3 |
| HHS Region (04) | 10 | 10 | 5,139,958 | 0.019 | 862,565.1 |
| HHS Region (05) | 0 | 0 | 4,834,450 | 0.000 | 603,446.1 |
| HHS Region (06) | 0 | 0 | 2,557,828 | 0.000 | 381,516.3 |
| HHS Region (07) | 0 | 0 | 830,446 | 0.000 | 106,029.6 |
| HHS Region (08) | 7 | 7 | 1,104,914 | 0.063 | 295,912.5 |
| HHS Region (09) | 0 | 0 | 2,080,995 | 0.000 | 254,765.3 |
| HHS Region (10) | 0 | 0 | 1,327,467 | 0.000 | 243,298.5 |
| HHS Region (11) | 0 | 0 | 7,093 | 0.000 | 778.6 |
| HHS Region (Invalid) | 0 | 0 | 48,459 | 0.000 | 5,565.8 |
| HHS Region (Missing) | 0 | 0 | 784,794 | 0.000 | 85,282.5 |
| HHS Region (Other) | 0 | 0 | 0 | - | 0.0 |
| Molnupiravir | | | | | |
| HHS Region (01) | 4 | 4 | 422,443 | 0.095 | 46,025.1 |
| HHS Region (02) | 47 | 47 | 1,050,239 | 0.448 | 120,133.6 |
| HHS Region (03) | 229 | 229 | 1,416,127 | 1.617 | 189,288.6 |
| HHS Region (04) | 1,517 | 1,517 | 3,413,725 | 4.444 | 656,755.0 |
| HHS Region (05) | 295 | 295 | 2,419,208 | 1.219 | 365,035.7 |
| HHS Region (06) | 976 | 976 | 1,631,111 | 5.984 | 282,660.2 |
| HHS Region (07) | 103 | 103 | 566,013 | 1.820 | 79,369.9 |
| HHS Region (08) | 144 | 144 | 905,690 | 1.590 | 275,129.8 |
| HHS Region (09) | 76 | 76 | 1,252,010 | 0.607 | 166,637.0 |

Table 5. Summary of Exposures of Interest in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022, by Health and Human Services (HHS) Region

| | Number of Patients | Number of Index Dates | Number of Eligible Members ¹ | Number of Exposed Members per 10,000 Eligible Members | Total Eligible Member-Years ¹ |
|---|--------------------|-----------------------|---|---|--|
| HHS Region (10) | 38 | 38 | 922,761 | 0.412 | 200,145.0 |
| HHS Region (11) | 0 | 0 | 7,081 | 0.000 | 777.4 |
| HHS Region (Invalid) | 4 | 4 | 13,146 | 3.043 | 1,727.1 |
| HHS Region (Missing) | 0 | 0 | 86,341 | 0.000 | 9,828.2 |
| HHS Region (Other) | 0 | 0 | 0 | - | 0.0 |
| Outpatient Remdesivir | | | | | |
| HHS Region (01) | 17 | 17 | 753,977 | 0.225 | 80,117.4 |
| HHS Region (02) | 50 | 50 | 2,414,255 | 0.207 | 266,030.2 |
| HHS Region (03) | 83 | 83 | 2,707,768 | 0.307 | 325,549.8 |
| HHS Region (04) | 114 | 114 | 5,139,958 | 0.222 | 862,555.0 |
| HHS Region (05) | 94 | 94 | 4,834,450 | 0.194 | 603,438.1 |
| HHS Region (06) | 30 | 30 | 2,557,828 | 0.117 | 381,513.3 |
| HHS Region (07) | 29 | 29 | 830,446 | 0.349 | 106,027.5 |
| HHS Region (08) | 21 | 21 | 1,104,914 | 0.190 | 295,909.0 |
| HHS Region (09) | 26 | 26 | 2,080,995 | 0.125 | 254,763.3 |
| HHS Region (10) | 86 | 86 | 1,327,467 | 0.648 | 243,284.4 |
| HHS Region (11) | 0 | 0 | 7,093 | 0.000 | 778.6 |
| HHS Region (Invalid) | 1 | 1 | 48,459 | 0.206 | 5,565.8 |
| HHS Region (Missing) | 0 | 0 | 784,794 | 0.000 | 85,282.5 |
| HHS Region (Other) | 0 | 0 | 0 | - | 0.0 |
| Same Day Bamlanivimab and Etesevimab | | | | | |
| HHS Region (01) | 81 | 81 | 753,977 | 1.074 | 80,111.3 |
| HHS Region (02) | 213 | 213 | 2,414,255 | 0.882 | 266,011.5 |
| HHS Region (03) | 415 | 415 | 2,707,768 | 1.533 | 325,507.3 |
| HHS Region (04) | 1,174 | 1,174 | 5,139,958 | 2.284 | 862,381.4 |
| HHS Region (05) | 882 | 882 | 4,834,450 | 1.824 | 603,333.0 |
| HHS Region (06) | 297 | 297 | 2,557,828 | 1.161 | 381,475.5 |

Table 5. Summary of Exposures of Interest in the Rapid COVID Sentinel Distributed Database (SDD) between December 22, 2021 and April 30, 2022, by Health and Human Services (HHS) Region

| | Number of Patients | Number of Index Dates | Number of Eligible Members ¹ | Number of Exposed Members per 10,000 Eligible Members | Total Eligible Member-Years ¹ |
|---------------------------------|--------------------|-----------------------|---|---|--|
| HHS Region (07) | 307 | 307 | 830,446 | 3.697 | 105,996.1 |
| HHS Region (08) | 155 | 155 | 1,104,914 | 1.403 | 295,879.2 |
| HHS Region (09) | 171 | 171 | 2,080,995 | 0.822 | 254,745.4 |
| HHS Region (10) | 16 | 16 | 1,327,467 | 0.121 | 243,296.9 |
| HHS Region (11) | 0 | 0 | 7,093 | 0.000 | 778.6 |
| HHS Region (Invalid) | 1 | 1 | 48,459 | 0.206 | 5,565.7 |
| HHS Region (Missing) | 0 | 0 | 784,794 | 0.000 | 85,282.5 |
| HHS Region (Other) | 0 | 0 | 0 | - | 0.0 |
| Casirivimab or Imdevimab | | | | | |
| HHS Region (01) | 135 | 135 | 753,977 | 1.791 | 80,105.5 |
| HHS Region (02) | 305 | 305 | 2,414,255 | 1.263 | 266,003.8 |
| HHS Region (03) | 777 | 777 | 2,707,768 | 2.870 | 325,472.8 |
| HHS Region (04) | 3,353 | 3,353 | 5,139,958 | 6.523 | 862,097.9 |
| HHS Region (05) | 1,132 | 1,132 | 4,834,450 | 2.342 | 603,306.9 |
| HHS Region (06) | 1,600 | 1,600 | 2,557,828 | 6.255 | 381,262.0 |
| HHS Region (07) | 474 | 474 | 830,446 | 5.708 | 105,984.0 |
| HHS Region (08) | 159 | 159 | 1,104,914 | 1.439 | 295,883.8 |
| HHS Region (09) | 433 | 433 | 2,080,995 | 2.081 | 254,718.8 |
| HHS Region (10) | 172 | 172 | 1,327,467 | 1.296 | 243,278.5 |
| HHS Region (11) | 0 | 0 | 7,093 | 0.000 | 778.6 |
| HHS Region (Invalid) | 3 | 3 | 48,459 | 0.619 | 5,565.1 |
| HHS Region (Missing) | 6 | 6 | 784,794 | 0.076 | 85,282.0 |
| HHS Region (Other) | 0 | 0 | 0 | - | 0.0 |

¹Eligible Members and Member-Years are reflective of the number of patients that met all cohort entry criteria on at least one day during the query period.

Appendix A. Start and End Dates for Each Data Partner (DP) as of Request Distribution Date (July 1, 2022)

| DP ID | Start Date | End Date¹ |
|--------------|-------------------|-----------------------------|
| DP01 | 01/01/2008 | 12/31/2021 |
| DP02 | 07/01/2017 | 12/31/2021 |
| DP03 | 07/01/2017 | 03/31/2022 |
| DP04 | 07/01/2017 | 02/28/2022 |
| DP05 | 07/01/2017 | 04/30/2022 |

¹End Date represents the earliest of: (1) query end date, or (2) last day of the most recent month for which all of a Data Partner's data tables (enrollment, dispensing, etc.) have at least 80% of the record count relative to the prior month.

Appendix B. List of States and Territories Included in Each Health and Human Services (HHS) Region

| HHS Region | States and Territories |
|------------|---|
| Region 01 | Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont |
| Region 02 | New Jersey, New York, Puerto Rico, Virgin Islands |
| Region 03 | Delaware, Maryland, Pennsylvania, Virginia, West Virginia, District of Columbia |
| Region 04 | Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee |
| Region 05 | Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin |
| Region 06 | Arkansas, Louisiana, New Mexico, Oklahoma, Texas |
| Region 07 | Iowa, Kansas, Missouri, Nebraska |
| Region 08 | Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming |
| Region 09 | Arizona, California, Hawaii, Nevada, American Samoa, Federated States of Micronesia, Guam, Palau |
| Region 10 | Alaska, Idaho, Oregon, Washington |
| Region 11 | Northern Mariana Islands, Marshall Islands |
| Missing | Missing |
| Invalid | Recorded geographic location does not match any identifiers per the Sentinel Common Data Model definition |

Appendix C. List of Healthcare Common Procedure Coding System, Level II (HCPCS) and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Exposures in this Request

| Code | Description | Code Category | Code Type |
|---|---|---------------|------------|
| Same-Day Bamlanivimab and Etesevimab | | | |
| M0245 | intravenous infusion, bamlanivimab and etesevimab, includes infusion and post administration monitoring | Procedure | HCPCS |
| Q0245 | Injection, bamlanivimab and etesevimab, 2100 mg | Procedure | HCPCS |
| XW033F6 | Introduction of Bamlanivimab Monoclonal Antibody into Peripheral Vein, Percutaneous Approach, New Technology Group 6 | Procedure | ICD-10-PCS |
| XW043F6 | Introduction of Bamlanivimab Monoclonal Antibody into Central Vein, Percutaneous Approach, New Technology Group 6 | Procedure | ICD-10-PCS |
| M0222 | Intravenous injection, bebtelovimab, includes injection and post administration monitoring | Procedure | HCPCS |
| M0223 | Intravenous injection, bebtelovimab, includes injection and post administration monitoring in the home or residence; this includes a beneficiary's home that has been made provider-based to the hospital during the COVID-19 public health emergency | Procedure | HCPCS |
| Q0222 | Injection, bebtelovimab, 175 mg | Procedure | HCPCS |
| XW033E6 | Introduction of Etesevimab Monoclonal Antibody into Peripheral Vein, Percutaneous Approach, | Procedure | ICD-10-PCS |
| XW043E6 | Introduction of Etesevimab Monoclonal Antibody into Central Vein, Percutaneous Approach, New | Procedure | ICD-10-PCS |
| Casirivimab or Imdevimab | | | |
| M0243 | intravenous infusion, casirivimab and imdevimab includes infusion and post administration monitoring | Procedure | HCPCS |
| Q0243 | Injection, casirivimab and imdevimab, 2400 mg | Procedure | HCPCS |
| XW033G6 | Introduction of REGN-COV2 monoclonal antibody into peripheral vein, percutaneous approach, new technology group 6 | Procedure | ICD-10-PCS |
| XW043G6 | Introduction of REGN-COV2 monoclonal antibody into central vein, percutaneous approach, new technology group 6 | Procedure | ICD-10-PCS |
| Remdesivir | | | |
| J0248 | Injection, remdesivir, 1mg | Procedure | HCPCS |
| XW033E5 | Introduction of Remdesivir Anti-infective into Peripheral Vein, Percutaneous Approach, New Technology Group 5 | Procedure | ICD-10-PCS |
| XW043E5 | Introduction of Remdesivir Anti-infective into Central Vein, Percutaneous Approach, New Technology Group 5 | Procedure | ICD-10-PCS |
| Sotrovimab | | | |
| M0247 | Intravenous infusion, sotrovimab, includes infusion and post administration monitoring | Procedure | HCPCS |
| M0248 | Intravenous infusion, sotrovimab, includes infusion and post administration monitoring in the home or residence; this includes a beneficiary's home that has been made provider-based to the hospital during the COVID-19 public health emergency | Procedure | HCPCS |
| Q0247 | Injection, sotrovimab, 500 mg | Procedure | HCPCS |

Appendix D. List of Non-Proprietary and Brand Names of Medical Products Used to Define Exposures in this Request

| Non-Proprietary Name |
|---|
| Same-day Bamlanivimab and Etesevimab |
| bamlanivimab |
| etesevimab |
| Casirivimab or Imdevimab |
| casirivimab |
| casirivimab (REGN10933)/imdevimab (REGN10987) |
| imdevimab |
| Molnupiravir |
| molnupiravir |
| Remdesivir |
| remdesivir |
| Sotrovimab |
| sotrovimab |
| Brand Name |
| Paxlovid |
| Nirmatrelvir/Ritonavir |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------------------------------------|---|---------------|-----------|
| Alpha 1 Antitrypsin Deficiency | | | |
| E88.01 | Alpha-1-antitrypsin deficiency | Diagnosis | ICD-10-CM |
| Asthma | | | |
| J45 | Asthma | Diagnosis | ICD-10-CM |
| J45.2 | Mild intermittent asthma | Diagnosis | ICD-10-CM |
| J45.20 | Mild intermittent asthma, uncomplicated | Diagnosis | ICD-10-CM |
| J45.21 | Mild intermittent asthma with (acute) exacerbation | Diagnosis | ICD-10-CM |
| J45.22 | Mild intermittent asthma with status asthmaticus | Diagnosis | ICD-10-CM |
| J45.3 | Mild persistent asthma | Diagnosis | ICD-10-CM |
| J45.30 | Mild persistent asthma, uncomplicated | Diagnosis | ICD-10-CM |
| J45.31 | Mild persistent asthma with (acute) exacerbation | Diagnosis | ICD-10-CM |
| J45.32 | Mild persistent asthma with status asthmaticus | Diagnosis | ICD-10-CM |
| J45.4 | Moderate persistent asthma | Diagnosis | ICD-10-CM |
| J45.40 | Moderate persistent asthma, uncomplicated | Diagnosis | ICD-10-CM |
| J45.41 | Moderate persistent asthma with (acute) exacerbation | Diagnosis | ICD-10-CM |
| J45.42 | Moderate persistent asthma with status asthmaticus | Diagnosis | ICD-10-CM |
| J45.5 | Severe persistent asthma | Diagnosis | ICD-10-CM |
| J45.50 | Severe persistent asthma, uncomplicated | Diagnosis | ICD-10-CM |
| J45.51 | Severe persistent asthma with (acute) exacerbation | Diagnosis | ICD-10-CM |
| J45.52 | Severe persistent asthma with status asthmaticus | Diagnosis | ICD-10-CM |
| J45.9 | Other and unspecified asthma | Diagnosis | ICD-10-CM |
| J45.90 | Unspecified asthma | Diagnosis | ICD-10-CM |
| J45.901 | Unspecified asthma with (acute) exacerbation | Diagnosis | ICD-10-CM |
| J45.902 | Unspecified asthma with status asthmaticus | Diagnosis | ICD-10-CM |
| J45.909 | Unspecified asthma, uncomplicated | Diagnosis | ICD-10-CM |
| J45.99 | Other asthma | Diagnosis | ICD-10-CM |
| J45.990 | Exercise induced bronchospasm | Diagnosis | ICD-10-CM |
| J45.991 | Cough variant asthma | Diagnosis | ICD-10-CM |
| J45.998 | Other asthma | Diagnosis | ICD-10-CM |
| Bronchiectasis | | | |
| J470 | Bronchiectasis with acute lower respiratory infection | Diagnosis | ICD-10-CM |
| J471 | Bronchiectasis with (acute) exacerbation | Diagnosis | ICD-10-CM |
| J479 | Bronchiectasis, uncomplicated | Diagnosis | ICD-10-CM |
| Cancer | | | |
| C00 | Malignant neoplasm of lip | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------|---|---------------|-----------|
| C00.0 | Malignant neoplasm of external upper lip | Diagnosis | ICD-10-CM |
| C00.1 | Malignant neoplasm of external lower lip | Diagnosis | ICD-10-CM |
| C00.2 | Malignant neoplasm of external lip, unspecified | Diagnosis | ICD-10-CM |
| C00.3 | Malignant neoplasm of upper lip, inner aspect | Diagnosis | ICD-10-CM |
| C00.4 | Malignant neoplasm of lower lip, inner aspect | Diagnosis | ICD-10-CM |
| C00.5 | Malignant neoplasm of lip, unspecified, inner aspect | Diagnosis | ICD-10-CM |
| C00.6 | Malignant neoplasm of commissure of lip, unspecified | Diagnosis | ICD-10-CM |
| C00.8 | Malignant neoplasm of overlapping sites of lip | Diagnosis | ICD-10-CM |
| C00.9 | Malignant neoplasm of lip, unspecified | Diagnosis | ICD-10-CM |
| C01 | Malignant neoplasm of base of tongue | Diagnosis | ICD-10-CM |
| C02 | Malignant neoplasm of other and unspecified parts of tongue | Diagnosis | ICD-10-CM |
| C02.0 | Malignant neoplasm of dorsal surface of tongue | Diagnosis | ICD-10-CM |
| C02.1 | Malignant neoplasm of border of tongue | Diagnosis | ICD-10-CM |
| C02.2 | Malignant neoplasm of ventral surface of tongue | Diagnosis | ICD-10-CM |
| C02.3 | Malignant neoplasm of anterior two-thirds of tongue, part unspecified | Diagnosis | ICD-10-CM |
| C02.4 | Malignant neoplasm of lingual tonsil | Diagnosis | ICD-10-CM |
| C02.8 | Malignant neoplasm of overlapping sites of tongue | Diagnosis | ICD-10-CM |
| C02.9 | Malignant neoplasm of tongue, unspecified | Diagnosis | ICD-10-CM |
| C03 | Malignant neoplasm of gum | Diagnosis | ICD-10-CM |
| C03.0 | Malignant neoplasm of upper gum | Diagnosis | ICD-10-CM |
| C03.1 | Malignant neoplasm of lower gum | Diagnosis | ICD-10-CM |
| C03.9 | Malignant neoplasm of gum, unspecified | Diagnosis | ICD-10-CM |
| C04 | Malignant neoplasm of floor of mouth | Diagnosis | ICD-10-CM |
| C04.0 | Malignant neoplasm of anterior floor of mouth | Diagnosis | ICD-10-CM |
| C04.1 | Malignant neoplasm of lateral floor of mouth | Diagnosis | ICD-10-CM |
| C04.8 | Malignant neoplasm of overlapping sites of floor of mouth | Diagnosis | ICD-10-CM |
| C04.9 | Malignant neoplasm of floor of mouth, unspecified | Diagnosis | ICD-10-CM |
| C05 | Malignant neoplasm of palate | Diagnosis | ICD-10-CM |
| C05.0 | Malignant neoplasm of hard palate | Diagnosis | ICD-10-CM |
| C05.1 | Malignant neoplasm of soft palate | Diagnosis | ICD-10-CM |
| C05.2 | Malignant neoplasm of uvula | Diagnosis | ICD-10-CM |
| C05.8 | Malignant neoplasm of overlapping sites of palate | Diagnosis | ICD-10-CM |
| C05.9 | Malignant neoplasm of palate, unspecified | Diagnosis | ICD-10-CM |
| C06 | Malignant neoplasm of other and unspecified parts of mouth | Diagnosis | ICD-10-CM |
| C06.0 | Malignant neoplasm of cheek mucosa | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------------|---|----------------------|------------------|
| C06.1 | Malignant neoplasm of vestibule of mouth | Diagnosis | ICD-10-CM |
| C06.2 | Malignant neoplasm of retromolar area | Diagnosis | ICD-10-CM |
| C06.8 | Malignant neoplasm of overlapping sites of other and unspecified parts of mouth | Diagnosis | ICD-10-CM |
| C06.80 | Malignant neoplasm of overlapping sites of unspecified parts of mouth | Diagnosis | ICD-10-CM |
| C06.89 | Malignant neoplasm of overlapping sites of other parts of mouth | Diagnosis | ICD-10-CM |
| C06.9 | Malignant neoplasm of mouth, unspecified | Diagnosis | ICD-10-CM |
| C07 | Malignant neoplasm of parotid gland | Diagnosis | ICD-10-CM |
| C08 | Malignant neoplasm of other and unspecified major salivary glands | Diagnosis | ICD-10-CM |
| C08.0 | Malignant neoplasm of submandibular gland | Diagnosis | ICD-10-CM |
| C08.1 | Malignant neoplasm of sublingual gland | Diagnosis | ICD-10-CM |
| C08.9 | Malignant neoplasm of major salivary gland, unspecified | Diagnosis | ICD-10-CM |
| C09 | Malignant neoplasm of tonsil | Diagnosis | ICD-10-CM |
| C09.0 | Malignant neoplasm of tonsillar fossa | Diagnosis | ICD-10-CM |
| C09.1 | Malignant neoplasm of tonsillar pillar (anterior) (posterior) | Diagnosis | ICD-10-CM |
| C09.8 | Malignant neoplasm of overlapping sites of tonsil | Diagnosis | ICD-10-CM |
| C09.9 | Malignant neoplasm of tonsil, unspecified | Diagnosis | ICD-10-CM |
| C10 | Malignant neoplasm of oropharynx | Diagnosis | ICD-10-CM |
| C10.0 | Malignant neoplasm of vallecula | Diagnosis | ICD-10-CM |
| C10.1 | Malignant neoplasm of anterior surface of epiglottis | Diagnosis | ICD-10-CM |
| C10.2 | Malignant neoplasm of lateral wall of oropharynx | Diagnosis | ICD-10-CM |
| C10.3 | Malignant neoplasm of posterior wall of oropharynx | Diagnosis | ICD-10-CM |
| C10.4 | Malignant neoplasm of branchial cleft | Diagnosis | ICD-10-CM |
| C10.8 | Malignant neoplasm of overlapping sites of oropharynx | Diagnosis | ICD-10-CM |
| C10.9 | Malignant neoplasm of oropharynx, unspecified | Diagnosis | ICD-10-CM |
| C11 | Malignant neoplasm of nasopharynx | Diagnosis | ICD-10-CM |
| C11.0 | Malignant neoplasm of superior wall of nasopharynx | Diagnosis | ICD-10-CM |
| C11.1 | Malignant neoplasm of posterior wall of nasopharynx | Diagnosis | ICD-10-CM |
| C11.2 | Malignant neoplasm of lateral wall of nasopharynx | Diagnosis | ICD-10-CM |
| C11.3 | Malignant neoplasm of anterior wall of nasopharynx | Diagnosis | ICD-10-CM |
| C11.8 | Malignant neoplasm of overlapping sites of nasopharynx | Diagnosis | ICD-10-CM |
| C11.9 | Malignant neoplasm of nasopharynx, unspecified | Diagnosis | ICD-10-CM |
| C12 | Malignant neoplasm of pyriform sinus | Diagnosis | ICD-10-CM |
| C13 | Malignant neoplasm of hypopharynx | Diagnosis | ICD-10-CM |
| C13.0 | Malignant neoplasm of postcricoid region | Diagnosis | ICD-10-CM |
| C13.1 | Malignant neoplasm of aryepiglottic fold, hypopharyngeal aspect | Diagnosis | ICD-10-CM |
| C13.2 | Malignant neoplasm of posterior wall of hypopharynx | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------|---|---------------|-----------|
| C13.8 | Malignant neoplasm of overlapping sites of hypopharynx | Diagnosis | ICD-10-CM |
| C13.9 | Malignant neoplasm of hypopharynx, unspecified | Diagnosis | ICD-10-CM |
| C14 | Malignant neoplasm of other and ill-defined sites in the lip, oral cavity and pharynx | Diagnosis | ICD-10-CM |
| C14.0 | Malignant neoplasm of pharynx, unspecified | Diagnosis | ICD-10-CM |
| C14.2 | Malignant neoplasm of Waldeyer's ring | Diagnosis | ICD-10-CM |
| C14.8 | Malignant neoplasm of overlapping sites of lip, oral cavity and pharynx | Diagnosis | ICD-10-CM |
| C15 | Malignant neoplasm of esophagus | Diagnosis | ICD-10-CM |
| C15.3 | Malignant neoplasm of upper third of esophagus | Diagnosis | ICD-10-CM |
| C15.4 | Malignant neoplasm of middle third of esophagus | Diagnosis | ICD-10-CM |
| C15.5 | Malignant neoplasm of lower third of esophagus | Diagnosis | ICD-10-CM |
| C15.8 | Malignant neoplasm of overlapping sites of esophagus | Diagnosis | ICD-10-CM |
| C15.9 | Malignant neoplasm of esophagus, unspecified | Diagnosis | ICD-10-CM |
| C16 | Malignant neoplasm of stomach | Diagnosis | ICD-10-CM |
| C16.0 | Malignant neoplasm of cardia | Diagnosis | ICD-10-CM |
| C16.1 | Malignant neoplasm of fundus of stomach | Diagnosis | ICD-10-CM |
| C16.2 | Malignant neoplasm of body of stomach | Diagnosis | ICD-10-CM |
| C16.3 | Malignant neoplasm of pyloric antrum | Diagnosis | ICD-10-CM |
| C16.4 | Malignant neoplasm of pylorus | Diagnosis | ICD-10-CM |
| C16.5 | Malignant neoplasm of lesser curvature of stomach, unspecified | Diagnosis | ICD-10-CM |
| C16.6 | Malignant neoplasm of greater curvature of stomach, unspecified | Diagnosis | ICD-10-CM |
| C16.8 | Malignant neoplasm of overlapping sites of stomach | Diagnosis | ICD-10-CM |
| C16.9 | Malignant neoplasm of stomach, unspecified | Diagnosis | ICD-10-CM |
| C17 | Malignant neoplasm of small intestine | Diagnosis | ICD-10-CM |
| C17.0 | Malignant neoplasm of duodenum | Diagnosis | ICD-10-CM |
| C17.1 | Malignant neoplasm of jejunum | Diagnosis | ICD-10-CM |
| C17.2 | Malignant neoplasm of ileum | Diagnosis | ICD-10-CM |
| C17.3 | Meckel's diverticulum, malignant | Diagnosis | ICD-10-CM |
| C17.8 | Malignant neoplasm of overlapping sites of small intestine | Diagnosis | ICD-10-CM |
| C17.9 | Malignant neoplasm of small intestine, unspecified | Diagnosis | ICD-10-CM |
| C18 | Malignant neoplasm of colon | Diagnosis | ICD-10-CM |
| C18.0 | Malignant neoplasm of cecum | Diagnosis | ICD-10-CM |
| C18.1 | Malignant neoplasm of appendix | Diagnosis | ICD-10-CM |
| C18.2 | Malignant neoplasm of ascending colon | Diagnosis | ICD-10-CM |
| C18.3 | Malignant neoplasm of hepatic flexure | Diagnosis | ICD-10-CM |
| C18.4 | Malignant neoplasm of transverse colon | Diagnosis | ICD-10-CM |
| C18.5 | Malignant neoplasm of splenic flexure | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------------|--|----------------------|------------------|
| C18.6 | Malignant neoplasm of descending colon | Diagnosis | ICD-10-CM |
| C18.7 | Malignant neoplasm of sigmoid colon | Diagnosis | ICD-10-CM |
| C18.8 | Malignant neoplasm of overlapping sites of colon | Diagnosis | ICD-10-CM |
| C18.9 | Malignant neoplasm of colon, unspecified | Diagnosis | ICD-10-CM |
| C19 | Malignant neoplasm of rectosigmoid junction | Diagnosis | ICD-10-CM |
| C20 | Malignant neoplasm of rectum | Diagnosis | ICD-10-CM |
| C21 | Malignant neoplasm of anus and anal canal | Diagnosis | ICD-10-CM |
| C21.0 | Malignant neoplasm of anus, unspecified | Diagnosis | ICD-10-CM |
| C21.1 | Malignant neoplasm of anal canal | Diagnosis | ICD-10-CM |
| C21.2 | Malignant neoplasm of cloacogenic zone | Diagnosis | ICD-10-CM |
| C21.8 | Malignant neoplasm of overlapping sites of rectum, anus and anal canal | Diagnosis | ICD-10-CM |
| C22 | Malignant neoplasm of liver and intrahepatic bile ducts | Diagnosis | ICD-10-CM |
| C22.0 | Liver cell carcinoma | Diagnosis | ICD-10-CM |
| C22.1 | Intrahepatic bile duct carcinoma | Diagnosis | ICD-10-CM |
| C22.2 | Hepatoblastoma | Diagnosis | ICD-10-CM |
| C22.3 | Angiosarcoma of liver | Diagnosis | ICD-10-CM |
| C22.4 | Other sarcomas of liver | Diagnosis | ICD-10-CM |
| C22.7 | Other specified carcinomas of liver | Diagnosis | ICD-10-CM |
| C22.8 | Malignant neoplasm of liver, primary, unspecified as to type | Diagnosis | ICD-10-CM |
| C22.9 | Malignant neoplasm of liver, not specified as primary or secondary | Diagnosis | ICD-10-CM |
| C23 | Malignant neoplasm of gallbladder | Diagnosis | ICD-10-CM |
| C24 | Malignant neoplasm of other and unspecified parts of biliary tract | Diagnosis | ICD-10-CM |
| C24.0 | Malignant neoplasm of extrahepatic bile duct | Diagnosis | ICD-10-CM |
| C24.1 | Malignant neoplasm of ampulla of Vater | Diagnosis | ICD-10-CM |
| C24.8 | Malignant neoplasm of overlapping sites of biliary tract | Diagnosis | ICD-10-CM |
| C24.9 | Malignant neoplasm of biliary tract, unspecified | Diagnosis | ICD-10-CM |
| C25 | Malignant neoplasm of pancreas | Diagnosis | ICD-10-CM |
| C25.0 | Malignant neoplasm of head of pancreas | Diagnosis | ICD-10-CM |
| C25.1 | Malignant neoplasm of body of pancreas | Diagnosis | ICD-10-CM |
| C25.2 | Malignant neoplasm of tail of pancreas | Diagnosis | ICD-10-CM |
| C25.3 | Malignant neoplasm of pancreatic duct | Diagnosis | ICD-10-CM |
| C25.4 | Malignant neoplasm of endocrine pancreas | Diagnosis | ICD-10-CM |
| C25.7 | Malignant neoplasm of other parts of pancreas | Diagnosis | ICD-10-CM |
| C25.8 | Malignant neoplasm of overlapping sites of pancreas | Diagnosis | ICD-10-CM |
| C25.9 | Malignant neoplasm of pancreas, unspecified | Diagnosis | ICD-10-CM |
| C26 | Malignant neoplasm of other and ill-defined digestive organs | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C26.0 | Malignant neoplasm of intestinal tract, part unspecified | Diagnosis | ICD-10-CM |
| C26.1 | Malignant neoplasm of spleen | Diagnosis | ICD-10-CM |
| C26.9 | Malignant neoplasm of ill-defined sites within the digestive system | Diagnosis | ICD-10-CM |
| C30 | Malignant neoplasm of nasal cavity and middle ear | Diagnosis | ICD-10-CM |
| C30.0 | Malignant neoplasm of nasal cavity | Diagnosis | ICD-10-CM |
| C30.1 | Malignant neoplasm of middle ear | Diagnosis | ICD-10-CM |
| C31 | Malignant neoplasm of accessory sinuses | Diagnosis | ICD-10-CM |
| C31.0 | Malignant neoplasm of maxillary sinus | Diagnosis | ICD-10-CM |
| C31.1 | Malignant neoplasm of ethmoidal sinus | Diagnosis | ICD-10-CM |
| C31.2 | Malignant neoplasm of frontal sinus | Diagnosis | ICD-10-CM |
| C31.3 | Malignant neoplasm of sphenoid sinus | Diagnosis | ICD-10-CM |
| C31.8 | Malignant neoplasm of overlapping sites of accessory sinuses | Diagnosis | ICD-10-CM |
| C31.9 | Malignant neoplasm of accessory sinus, unspecified | Diagnosis | ICD-10-CM |
| C32 | Malignant neoplasm of larynx | Diagnosis | ICD-10-CM |
| C32.0 | Malignant neoplasm of glottis | Diagnosis | ICD-10-CM |
| C32.1 | Malignant neoplasm of supraglottis | Diagnosis | ICD-10-CM |
| C32.2 | Malignant neoplasm of subglottis | Diagnosis | ICD-10-CM |
| C32.3 | Malignant neoplasm of laryngeal cartilage | Diagnosis | ICD-10-CM |
| C32.8 | Malignant neoplasm of overlapping sites of larynx | Diagnosis | ICD-10-CM |
| C32.9 | Malignant neoplasm of larynx, unspecified | Diagnosis | ICD-10-CM |
| C33 | Malignant neoplasm of trachea | Diagnosis | ICD-10-CM |
| C34 | Malignant neoplasm of bronchus and lung | Diagnosis | ICD-10-CM |
| C34.0 | Malignant neoplasm of main bronchus | Diagnosis | ICD-10-CM |
| C34.00 | Malignant neoplasm of unspecified main bronchus | Diagnosis | ICD-10-CM |
| C34.01 | Malignant neoplasm of right main bronchus | Diagnosis | ICD-10-CM |
| C34.02 | Malignant neoplasm of left main bronchus | Diagnosis | ICD-10-CM |
| C34.1 | Malignant neoplasm of upper lobe, bronchus or lung | Diagnosis | ICD-10-CM |
| C34.10 | Malignant neoplasm of upper lobe, unspecified bronchus or lung | Diagnosis | ICD-10-CM |
| C34.11 | Malignant neoplasm of upper lobe, right bronchus or lung | Diagnosis | ICD-10-CM |
| C34.12 | Malignant neoplasm of upper lobe, left bronchus or lung | Diagnosis | ICD-10-CM |
| C34.2 | Malignant neoplasm of middle lobe, bronchus or lung | Diagnosis | ICD-10-CM |
| C34.3 | Malignant neoplasm of lower lobe, bronchus or lung | Diagnosis | ICD-10-CM |
| C34.30 | Malignant neoplasm of lower lobe, unspecified bronchus or lung | Diagnosis | ICD-10-CM |
| C34.31 | Malignant neoplasm of lower lobe, right bronchus or lung | Diagnosis | ICD-10-CM |
| C34.32 | Malignant neoplasm of lower lobe, left bronchus or lung | Diagnosis | ICD-10-CM |
| C34.8 | Malignant neoplasm of overlapping sites of bronchus and lung | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| C34.80 | Malignant neoplasm of overlapping sites of unspecified bronchus and lung | Diagnosis | ICD-10-CM |
| C34.81 | Malignant neoplasm of overlapping sites of right bronchus and lung | Diagnosis | ICD-10-CM |
| C34.82 | Malignant neoplasm of overlapping sites of left bronchus and lung | Diagnosis | ICD-10-CM |
| C34.9 | Malignant neoplasm of unspecified part of bronchus or lung | Diagnosis | ICD-10-CM |
| C34.90 | Malignant neoplasm of unspecified part of unspecified bronchus or lung | Diagnosis | ICD-10-CM |
| C34.91 | Malignant neoplasm of unspecified part of right bronchus or lung | Diagnosis | ICD-10-CM |
| C34.92 | Malignant neoplasm of unspecified part of left bronchus or lung | Diagnosis | ICD-10-CM |
| C37 | Malignant neoplasm of thymus | Diagnosis | ICD-10-CM |
| C38 | Malignant neoplasm of heart, mediastinum and pleura | Diagnosis | ICD-10-CM |
| C38.0 | Malignant neoplasm of heart | Diagnosis | ICD-10-CM |
| C38.1 | Malignant neoplasm of anterior mediastinum | Diagnosis | ICD-10-CM |
| C38.2 | Malignant neoplasm of posterior mediastinum | Diagnosis | ICD-10-CM |
| C38.3 | Malignant neoplasm of mediastinum, part unspecified | Diagnosis | ICD-10-CM |
| C38.4 | Malignant neoplasm of pleura | Diagnosis | ICD-10-CM |
| C38.8 | Malignant neoplasm of overlapping sites of heart, mediastinum and pleura | Diagnosis | ICD-10-CM |
| C39 | Malignant neoplasm of other and ill-defined sites in the respiratory system and intrathoracic organs | Diagnosis | ICD-10-CM |
| C39.0 | Malignant neoplasm of upper respiratory tract, part unspecified | Diagnosis | ICD-10-CM |
| C39.9 | Malignant neoplasm of lower respiratory tract, part unspecified | Diagnosis | ICD-10-CM |
| C40 | Malignant neoplasm of bone and articular cartilage of limbs | Diagnosis | ICD-10-CM |
| C40.0 | Malignant neoplasm of scapula and long bones of upper limb | Diagnosis | ICD-10-CM |
| C40.00 | Malignant neoplasm of scapula and long bones of unspecified upper limb | Diagnosis | ICD-10-CM |
| C40.01 | Malignant neoplasm of scapula and long bones of right upper limb | Diagnosis | ICD-10-CM |
| C40.02 | Malignant neoplasm of scapula and long bones of left upper limb | Diagnosis | ICD-10-CM |
| C40.1 | Malignant neoplasm of short bones of upper limb | Diagnosis | ICD-10-CM |
| C40.10 | Malignant neoplasm of short bones of unspecified upper limb | Diagnosis | ICD-10-CM |
| C40.11 | Malignant neoplasm of short bones of right upper limb | Diagnosis | ICD-10-CM |
| C40.12 | Malignant neoplasm of short bones of left upper limb | Diagnosis | ICD-10-CM |
| C40.2 | Malignant neoplasm of long bones of lower limb | Diagnosis | ICD-10-CM |
| C40.20 | Malignant neoplasm of long bones of unspecified lower limb | Diagnosis | ICD-10-CM |
| C40.21 | Malignant neoplasm of long bones of right lower limb | Diagnosis | ICD-10-CM |
| C40.22 | Malignant neoplasm of long bones of left lower limb | Diagnosis | ICD-10-CM |
| C40.3 | Malignant neoplasm of short bones of lower limb | Diagnosis | ICD-10-CM |
| C40.30 | Malignant neoplasm of short bones of unspecified lower limb | Diagnosis | ICD-10-CM |
| C40.31 | Malignant neoplasm of short bones of right lower limb | Diagnosis | ICD-10-CM |
| C40.32 | Malignant neoplasm of short bones of left lower limb | Diagnosis | ICD-10-CM |
| C40.8 | Malignant neoplasm of overlapping sites of bone and articular cartilage of limb | Diagnosis | ICD-10-CM |
| C40.80 | Malignant neoplasm of overlapping sites of bone and articular cartilage of unspecified limb | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| C40.81 | Malignant neoplasm of overlapping sites of bone and articular cartilage of right limb | Diagnosis | ICD-10-CM |
| C40.82 | Malignant neoplasm of overlapping sites of bone and articular cartilage of left limb | Diagnosis | ICD-10-CM |
| C40.9 | Malignant neoplasm of unspecified bones and articular cartilage of limb | Diagnosis | ICD-10-CM |
| C40.90 | Malignant neoplasm of unspecified bones and articular cartilage of unspecified limb | Diagnosis | ICD-10-CM |
| C40.91 | Malignant neoplasm of unspecified bones and articular cartilage of right limb | Diagnosis | ICD-10-CM |
| C40.92 | Malignant neoplasm of unspecified bones and articular cartilage of left limb | Diagnosis | ICD-10-CM |
| C41 | Malignant neoplasm of bone and articular cartilage of other and unspecified sites | Diagnosis | ICD-10-CM |
| C41.0 | Malignant neoplasm of bones of skull and face | Diagnosis | ICD-10-CM |
| C41.1 | Malignant neoplasm of mandible | Diagnosis | ICD-10-CM |
| C41.2 | Malignant neoplasm of vertebral column | Diagnosis | ICD-10-CM |
| C41.3 | Malignant neoplasm of ribs, sternum and clavicle | Diagnosis | ICD-10-CM |
| C41.4 | Malignant neoplasm of pelvic bones, sacrum and coccyx | Diagnosis | ICD-10-CM |
| C41.9 | Malignant neoplasm of bone and articular cartilage, unspecified | Diagnosis | ICD-10-CM |
| C43 | Malignant melanoma of skin | Diagnosis | ICD-10-CM |
| C43.0 | Malignant melanoma of lip | Diagnosis | ICD-10-CM |
| C43.1 | Malignant melanoma of eyelid, including canthus | Diagnosis | ICD-10-CM |
| C43.10 | Malignant melanoma of unspecified eyelid, including canthus | Diagnosis | ICD-10-CM |
| C43.11 | Malignant melanoma of right eyelid, including canthus | Diagnosis | ICD-10-CM |
| C43.111 | Malignant melanoma of right upper eyelid, including canthus | Diagnosis | ICD-10-CM |
| C43.112 | Malignant melanoma of right lower eyelid, including canthus | Diagnosis | ICD-10-CM |
| C43.12 | Malignant melanoma of left eyelid, including canthus | Diagnosis | ICD-10-CM |
| C43.121 | Malignant melanoma of left upper eyelid, including canthus | Diagnosis | ICD-10-CM |
| C43.122 | Malignant melanoma of left lower eyelid, including canthus | Diagnosis | ICD-10-CM |
| C43.2 | Malignant melanoma of ear and external auricular canal | Diagnosis | ICD-10-CM |
| C43.20 | Malignant melanoma of unspecified ear and external auricular canal | Diagnosis | ICD-10-CM |
| C43.21 | Malignant melanoma of right ear and external auricular canal | Diagnosis | ICD-10-CM |
| C43.22 | Malignant melanoma of left ear and external auricular canal | Diagnosis | ICD-10-CM |
| C43.3 | Malignant melanoma of other and unspecified parts of face | Diagnosis | ICD-10-CM |
| C43.30 | Malignant melanoma of unspecified part of face | Diagnosis | ICD-10-CM |
| C43.31 | Malignant melanoma of nose | Diagnosis | ICD-10-CM |
| C43.39 | Malignant melanoma of other parts of face | Diagnosis | ICD-10-CM |
| C43.4 | Malignant melanoma of scalp and neck | Diagnosis | ICD-10-CM |
| C43.5 | Malignant melanoma of trunk | Diagnosis | ICD-10-CM |
| C43.51 | Malignant melanoma of anal skin | Diagnosis | ICD-10-CM |
| C43.52 | Malignant melanoma of skin of breast | Diagnosis | ICD-10-CM |
| C43.59 | Malignant melanoma of other part of trunk | Diagnosis | ICD-10-CM |
| C43.6 | Malignant melanoma of upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C43.60 | Malignant melanoma of unspecified upper limb, including shoulder | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C43.61 | Malignant melanoma of right upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C43.62 | Malignant melanoma of left upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C43.7 | Malignant melanoma of lower limb, including hip | Diagnosis | ICD-10-CM |
| C43.70 | Malignant melanoma of unspecified lower limb, including hip | Diagnosis | ICD-10-CM |
| C43.71 | Malignant melanoma of right lower limb, including hip | Diagnosis | ICD-10-CM |
| C43.72 | Malignant melanoma of left lower limb, including hip | Diagnosis | ICD-10-CM |
| C43.8 | Malignant melanoma of overlapping sites of skin | Diagnosis | ICD-10-CM |
| C43.9 | Malignant melanoma of skin, unspecified | Diagnosis | ICD-10-CM |
| C45 | Mesothelioma | Diagnosis | ICD-10-CM |
| C45.0 | Mesothelioma of pleura | Diagnosis | ICD-10-CM |
| C45.1 | Mesothelioma of peritoneum | Diagnosis | ICD-10-CM |
| C45.2 | Mesothelioma of pericardium | Diagnosis | ICD-10-CM |
| C45.7 | Mesothelioma of other sites | Diagnosis | ICD-10-CM |
| C45.9 | Mesothelioma, unspecified | Diagnosis | ICD-10-CM |
| C46 | Kaposi's sarcoma | Diagnosis | ICD-10-CM |
| C46.0 | Kaposi's sarcoma of skin | Diagnosis | ICD-10-CM |
| C46.1 | Kaposi's sarcoma of soft tissue | Diagnosis | ICD-10-CM |
| C46.2 | Kaposi's sarcoma of palate | Diagnosis | ICD-10-CM |
| C46.3 | Kaposi's sarcoma of lymph nodes | Diagnosis | ICD-10-CM |
| C46.4 | Kaposi's sarcoma of gastrointestinal sites | Diagnosis | ICD-10-CM |
| C46.5 | Kaposi's sarcoma of lung | Diagnosis | ICD-10-CM |
| C46.50 | Kaposi's sarcoma of unspecified lung | Diagnosis | ICD-10-CM |
| C46.51 | Kaposi's sarcoma of right lung | Diagnosis | ICD-10-CM |
| C46.52 | Kaposi's sarcoma of left lung | Diagnosis | ICD-10-CM |
| C46.7 | Kaposi's sarcoma of other sites | Diagnosis | ICD-10-CM |
| C46.9 | Kaposi's sarcoma, unspecified | Diagnosis | ICD-10-CM |
| C47 | Malignant neoplasm of peripheral nerves and autonomic nervous system | Diagnosis | ICD-10-CM |
| C47.0 | Malignant neoplasm of peripheral nerves of head, face and neck | Diagnosis | ICD-10-CM |
| C47.1 | Malignant neoplasm of peripheral nerves of upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C47.10 | Malignant neoplasm of peripheral nerves of unspecified upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C47.11 | Malignant neoplasm of peripheral nerves of right upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C47.12 | Malignant neoplasm of peripheral nerves of left upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C47.2 | Malignant neoplasm of peripheral nerves of lower limb, including hip | Diagnosis | ICD-10-CM |
| C47.20 | Malignant neoplasm of peripheral nerves of unspecified lower limb, including hip | Diagnosis | ICD-10-CM |
| C47.21 | Malignant neoplasm of peripheral nerves of right lower limb, including hip | Diagnosis | ICD-10-CM |
| C47.22 | Malignant neoplasm of peripheral nerves of left lower limb, including hip | Diagnosis | ICD-10-CM |
| C47.3 | Malignant neoplasm of peripheral nerves of thorax | Diagnosis | ICD-10-CM |
| C47.4 | Malignant neoplasm of peripheral nerves of abdomen | Diagnosis | ICD-10-CM |
| C47.5 | Malignant neoplasm of peripheral nerves of pelvis | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| C47.6 | Malignant neoplasm of peripheral nerves of trunk, unspecified | Diagnosis | ICD-10-CM |
| C47.8 | Malignant neoplasm of overlapping sites of peripheral nerves and autonomic nervous system | Diagnosis | ICD-10-CM |
| C47.9 | Malignant neoplasm of peripheral nerves and autonomic nervous system, unspecified | Diagnosis | ICD-10-CM |
| C48 | Malignant neoplasm of retroperitoneum and peritoneum | Diagnosis | ICD-10-CM |
| C48.0 | Malignant neoplasm of retroperitoneum | Diagnosis | ICD-10-CM |
| C48.1 | Malignant neoplasm of specified parts of peritoneum | Diagnosis | ICD-10-CM |
| C48.2 | Malignant neoplasm of peritoneum, unspecified | Diagnosis | ICD-10-CM |
| C48.8 | Malignant neoplasm of overlapping sites of retroperitoneum and peritoneum | Diagnosis | ICD-10-CM |
| C49 | Malignant neoplasm of other connective and soft tissue | Diagnosis | ICD-10-CM |
| C49.0 | Malignant neoplasm of connective and soft tissue of head, face and neck | Diagnosis | ICD-10-CM |
| C49.1 | Malignant neoplasm of connective and soft tissue of upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C49.10 | Malignant neoplasm of connective and soft tissue of unspecified upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C49.11 | Malignant neoplasm of connective and soft tissue of right upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C49.12 | Malignant neoplasm of connective and soft tissue of left upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C49.2 | Malignant neoplasm of connective and soft tissue of lower limb, including hip | Diagnosis | ICD-10-CM |
| C49.20 | Malignant neoplasm of connective and soft tissue of unspecified lower limb, including hip | Diagnosis | ICD-10-CM |
| C49.21 | Malignant neoplasm of connective and soft tissue of right lower limb, including hip | Diagnosis | ICD-10-CM |
| C49.22 | Malignant neoplasm of connective and soft tissue of left lower limb, including hip | Diagnosis | ICD-10-CM |
| C49.3 | Malignant neoplasm of connective and soft tissue of thorax | Diagnosis | ICD-10-CM |
| C49.4 | Malignant neoplasm of connective and soft tissue of abdomen | Diagnosis | ICD-10-CM |
| C49.5 | Malignant neoplasm of connective and soft tissue of pelvis | Diagnosis | ICD-10-CM |
| C49.6 | Malignant neoplasm of connective and soft tissue of trunk, unspecified | Diagnosis | ICD-10-CM |
| C49.8 | Malignant neoplasm of overlapping sites of connective and soft tissue | Diagnosis | ICD-10-CM |
| C49.9 | Malignant neoplasm of connective and soft tissue, unspecified | Diagnosis | ICD-10-CM |
| C49.A | Gastrointestinal stromal tumor | Diagnosis | ICD-10-CM |
| C49.A0 | Gastrointestinal stromal tumor, unspecified site | Diagnosis | ICD-10-CM |
| C49.A1 | Gastrointestinal stromal tumor of esophagus | Diagnosis | ICD-10-CM |
| C49.A2 | Gastrointestinal stromal tumor of stomach | Diagnosis | ICD-10-CM |
| C49.A3 | Gastrointestinal stromal tumor of small intestine | Diagnosis | ICD-10-CM |
| C49.A4 | Gastrointestinal stromal tumor of large intestine | Diagnosis | ICD-10-CM |
| C49.A5 | Gastrointestinal stromal tumor of rectum | Diagnosis | ICD-10-CM |
| C49.A9 | Gastrointestinal stromal tumor of other sites | Diagnosis | ICD-10-CM |
| C4A | Merkel cell carcinoma | Diagnosis | ICD-10-CM |
| C4A.0 | Merkel cell carcinoma of lip | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| C4A.1 | Merkel cell carcinoma of eyelid, including canthus | Diagnosis | ICD-10-CM |
| C4A.10 | Merkel cell carcinoma of unspecified eyelid, including canthus | Diagnosis | ICD-10-CM |
| C4A.11 | Merkel cell carcinoma of right eyelid, including canthus | Diagnosis | ICD-10-CM |
| C4A.111 | Merkel cell carcinoma of right upper eyelid, including canthus | Diagnosis | ICD-10-CM |
| C4A.112 | Merkel cell carcinoma of right lower eyelid, including canthus | Diagnosis | ICD-10-CM |
| C4A.12 | Merkel cell carcinoma of left eyelid, including canthus | Diagnosis | ICD-10-CM |
| C4A.121 | Merkel cell carcinoma of left upper eyelid, including canthus | Diagnosis | ICD-10-CM |
| C4A.122 | Merkel cell carcinoma of left lower eyelid, including canthus | Diagnosis | ICD-10-CM |
| C4A.2 | Merkel cell carcinoma of ear and external auricular canal | Diagnosis | ICD-10-CM |
| C4A.20 | Merkel cell carcinoma of unspecified ear and external auricular canal | Diagnosis | ICD-10-CM |
| C4A.21 | Merkel cell carcinoma of right ear and external auricular canal | Diagnosis | ICD-10-CM |
| C4A.22 | Merkel cell carcinoma of left ear and external auricular canal | Diagnosis | ICD-10-CM |
| C4A.3 | Merkel cell carcinoma of other and unspecified parts of face | Diagnosis | ICD-10-CM |
| C4A.30 | Merkel cell carcinoma of unspecified part of face | Diagnosis | ICD-10-CM |
| C4A.31 | Merkel cell carcinoma of nose | Diagnosis | ICD-10-CM |
| C4A.39 | Merkel cell carcinoma of other parts of face | Diagnosis | ICD-10-CM |
| C4A.4 | Merkel cell carcinoma of scalp and neck | Diagnosis | ICD-10-CM |
| C4A.5 | Merkel cell carcinoma of trunk | Diagnosis | ICD-10-CM |
| C4A.51 | Merkel cell carcinoma of anal skin | Diagnosis | ICD-10-CM |
| C4A.52 | Merkel cell carcinoma of skin of breast | Diagnosis | ICD-10-CM |
| C4A.59 | Merkel cell carcinoma of other part of trunk | Diagnosis | ICD-10-CM |
| C4A.6 | Merkel cell carcinoma of upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C4A.60 | Merkel cell carcinoma of unspecified upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C4A.61 | Merkel cell carcinoma of right upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C4A.62 | Merkel cell carcinoma of left upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C4A.7 | Merkel cell carcinoma of lower limb, including hip | Diagnosis | ICD-10-CM |
| C4A.70 | Merkel cell carcinoma of unspecified lower limb, including hip | Diagnosis | ICD-10-CM |
| C4A.71 | Merkel cell carcinoma of right lower limb, including hip | Diagnosis | ICD-10-CM |
| C4A.72 | Merkel cell carcinoma of left lower limb, including hip | Diagnosis | ICD-10-CM |
| C4A.8 | Merkel cell carcinoma of overlapping sites | Diagnosis | ICD-10-CM |
| C4A.9 | Merkel cell carcinoma, unspecified | Diagnosis | ICD-10-CM |
| C50 | Malignant neoplasm of breast | Diagnosis | ICD-10-CM |
| C50.0 | Malignant neoplasm of nipple and areola | Diagnosis | ICD-10-CM |
| C50.01 | Malignant neoplasm of nipple and areola, female | Diagnosis | ICD-10-CM |
| C50.011 | Malignant neoplasm of nipple and areola, right female breast | Diagnosis | ICD-10-CM |
| C50.012 | Malignant neoplasm of nipple and areola, left female breast | Diagnosis | ICD-10-CM |
| C50.019 | Malignant neoplasm of nipple and areola, unspecified female breast | Diagnosis | ICD-10-CM |
| C50.02 | Malignant neoplasm of nipple and areola, male | Diagnosis | ICD-10-CM |
| C50.021 | Malignant neoplasm of nipple and areola, right male breast | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| C50.022 | Malignant neoplasm of nipple and areola, left male breast | Diagnosis | ICD-10-CM |
| C50.029 | Malignant neoplasm of nipple and areola, unspecified male breast | Diagnosis | ICD-10-CM |
| C50.1 | Malignant neoplasm of central portion of breast | Diagnosis | ICD-10-CM |
| C50.11 | Malignant neoplasm of central portion of breast, female | Diagnosis | ICD-10-CM |
| C50.111 | Malignant neoplasm of central portion of right female breast | Diagnosis | ICD-10-CM |
| C50.112 | Malignant neoplasm of central portion of left female breast | Diagnosis | ICD-10-CM |
| C50.119 | Malignant neoplasm of central portion of unspecified female breast | Diagnosis | ICD-10-CM |
| C50.12 | Malignant neoplasm of central portion of breast, male | Diagnosis | ICD-10-CM |
| C50.121 | Malignant neoplasm of central portion of right male breast | Diagnosis | ICD-10-CM |
| C50.122 | Malignant neoplasm of central portion of left male breast | Diagnosis | ICD-10-CM |
| C50.129 | Malignant neoplasm of central portion of unspecified male breast | Diagnosis | ICD-10-CM |
| C50.2 | Malignant neoplasm of upper-inner quadrant of breast | Diagnosis | ICD-10-CM |
| C50.21 | Malignant neoplasm of upper-inner quadrant of breast, female | Diagnosis | ICD-10-CM |
| C50.211 | Malignant neoplasm of upper-inner quadrant of right female breast | Diagnosis | ICD-10-CM |
| C50.212 | Malignant neoplasm of upper-inner quadrant of left female breast | Diagnosis | ICD-10-CM |
| C50.219 | Malignant neoplasm of upper-inner quadrant of unspecified female breast | Diagnosis | ICD-10-CM |
| C50.22 | Malignant neoplasm of upper-inner quadrant of breast, male | Diagnosis | ICD-10-CM |
| C50.221 | Malignant neoplasm of upper-inner quadrant of right male breast | Diagnosis | ICD-10-CM |
| C50.222 | Malignant neoplasm of upper-inner quadrant of left male breast | Diagnosis | ICD-10-CM |
| C50.229 | Malignant neoplasm of upper-inner quadrant of unspecified male breast | Diagnosis | ICD-10-CM |
| C50.3 | Malignant neoplasm of lower-inner quadrant of breast | Diagnosis | ICD-10-CM |
| C50.31 | Malignant neoplasm of lower-inner quadrant of breast, female | Diagnosis | ICD-10-CM |
| C50.311 | Malignant neoplasm of lower-inner quadrant of right female breast | Diagnosis | ICD-10-CM |
| C50.312 | Malignant neoplasm of lower-inner quadrant of left female breast | Diagnosis | ICD-10-CM |
| C50.319 | Malignant neoplasm of lower-inner quadrant of unspecified female breast | Diagnosis | ICD-10-CM |
| C50.32 | Malignant neoplasm of lower-inner quadrant of breast, male | Diagnosis | ICD-10-CM |
| C50.321 | Malignant neoplasm of lower-inner quadrant of right male breast | Diagnosis | ICD-10-CM |
| C50.322 | Malignant neoplasm of lower-inner quadrant of left male breast | Diagnosis | ICD-10-CM |
| C50.329 | Malignant neoplasm of lower-inner quadrant of unspecified male breast | Diagnosis | ICD-10-CM |
| C50.4 | Malignant neoplasm of upper-outer quadrant of breast | Diagnosis | ICD-10-CM |
| C50.41 | Malignant neoplasm of upper-outer quadrant of breast, female | Diagnosis | ICD-10-CM |
| C50.411 | Malignant neoplasm of upper-outer quadrant of right female breast | Diagnosis | ICD-10-CM |
| C50.412 | Malignant neoplasm of upper-outer quadrant of left female breast | Diagnosis | ICD-10-CM |
| C50.419 | Malignant neoplasm of upper-outer quadrant of unspecified female breast | Diagnosis | ICD-10-CM |
| C50.42 | Malignant neoplasm of upper-outer quadrant of breast, male | Diagnosis | ICD-10-CM |
| C50.421 | Malignant neoplasm of upper-outer quadrant of right male breast | Diagnosis | ICD-10-CM |
| C50.422 | Malignant neoplasm of upper-outer quadrant of left male breast | Diagnosis | ICD-10-CM |
| C50.429 | Malignant neoplasm of upper-outer quadrant of unspecified male breast | Diagnosis | ICD-10-CM |
| C50.5 | Malignant neoplasm of lower-outer quadrant of breast | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| C50.51 | Malignant neoplasm of lower-outer quadrant of breast, female | Diagnosis | ICD-10-CM |
| C50.511 | Malignant neoplasm of lower-outer quadrant of right female breast | Diagnosis | ICD-10-CM |
| C50.512 | Malignant neoplasm of lower-outer quadrant of left female breast | Diagnosis | ICD-10-CM |
| C50.519 | Malignant neoplasm of lower-outer quadrant of unspecified female breast | Diagnosis | ICD-10-CM |
| C50.52 | Malignant neoplasm of lower-outer quadrant of breast, male | Diagnosis | ICD-10-CM |
| C50.521 | Malignant neoplasm of lower-outer quadrant of right male breast | Diagnosis | ICD-10-CM |
| C50.522 | Malignant neoplasm of lower-outer quadrant of left male breast | Diagnosis | ICD-10-CM |
| C50.529 | Malignant neoplasm of lower-outer quadrant of unspecified male breast | Diagnosis | ICD-10-CM |
| C50.6 | Malignant neoplasm of axillary tail of breast | Diagnosis | ICD-10-CM |
| C50.61 | Malignant neoplasm of axillary tail of breast, female | Diagnosis | ICD-10-CM |
| C50.611 | Malignant neoplasm of axillary tail of right female breast | Diagnosis | ICD-10-CM |
| C50.612 | Malignant neoplasm of axillary tail of left female breast | Diagnosis | ICD-10-CM |
| C50.619 | Malignant neoplasm of axillary tail of unspecified female breast | Diagnosis | ICD-10-CM |
| C50.62 | Malignant neoplasm of axillary tail of breast, male | Diagnosis | ICD-10-CM |
| C50.621 | Malignant neoplasm of axillary tail of right male breast | Diagnosis | ICD-10-CM |
| C50.622 | Malignant neoplasm of axillary tail of left male breast | Diagnosis | ICD-10-CM |
| C50.629 | Malignant neoplasm of axillary tail of unspecified male breast | Diagnosis | ICD-10-CM |
| C50.8 | Malignant neoplasm of overlapping sites of breast | Diagnosis | ICD-10-CM |
| C50.81 | Malignant neoplasm of overlapping sites of breast, female | Diagnosis | ICD-10-CM |
| C50.811 | Malignant neoplasm of overlapping sites of right female breast | Diagnosis | ICD-10-CM |
| C50.812 | Malignant neoplasm of overlapping sites of left female breast | Diagnosis | ICD-10-CM |
| C50.819 | Malignant neoplasm of overlapping sites of unspecified female breast | Diagnosis | ICD-10-CM |
| C50.82 | Malignant neoplasm of overlapping sites of breast, male | Diagnosis | ICD-10-CM |
| C50.821 | Malignant neoplasm of overlapping sites of right male breast | Diagnosis | ICD-10-CM |
| C50.822 | Malignant neoplasm of overlapping sites of left male breast | Diagnosis | ICD-10-CM |
| C50.829 | Malignant neoplasm of overlapping sites of unspecified male breast | Diagnosis | ICD-10-CM |
| C50.9 | Malignant neoplasm of breast of unspecified site | Diagnosis | ICD-10-CM |
| C50.91 | Malignant neoplasm of breast of unspecified site, female | Diagnosis | ICD-10-CM |
| C50.911 | Malignant neoplasm of unspecified site of right female breast | Diagnosis | ICD-10-CM |
| C50.912 | Malignant neoplasm of unspecified site of left female breast | Diagnosis | ICD-10-CM |
| C50.919 | Malignant neoplasm of unspecified site of unspecified female breast | Diagnosis | ICD-10-CM |
| C50.92 | Malignant neoplasm of breast of unspecified site, male | Diagnosis | ICD-10-CM |
| C50.921 | Malignant neoplasm of unspecified site of right male breast | Diagnosis | ICD-10-CM |
| C50.922 | Malignant neoplasm of unspecified site of left male breast | Diagnosis | ICD-10-CM |
| C50.929 | Malignant neoplasm of unspecified site of unspecified male breast | Diagnosis | ICD-10-CM |
| C51 | Malignant neoplasm of vulva | Diagnosis | ICD-10-CM |
| C51.0 | Malignant neoplasm of labium majus | Diagnosis | ICD-10-CM |
| C51.1 | Malignant neoplasm of labium minus | Diagnosis | ICD-10-CM |
| C51.2 | Malignant neoplasm of clitoris | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C51.8 | Malignant neoplasm of overlapping sites of vulva | Diagnosis | ICD-10-CM |
| C51.9 | Malignant neoplasm of vulva, unspecified | Diagnosis | ICD-10-CM |
| C52 | Malignant neoplasm of vagina | Diagnosis | ICD-10-CM |
| C53 | Malignant neoplasm of cervix uteri | Diagnosis | ICD-10-CM |
| C53.0 | Malignant neoplasm of endocervix | Diagnosis | ICD-10-CM |
| C53.1 | Malignant neoplasm of exocervix | Diagnosis | ICD-10-CM |
| C53.8 | Malignant neoplasm of overlapping sites of cervix uteri | Diagnosis | ICD-10-CM |
| C53.9 | Malignant neoplasm of cervix uteri, unspecified | Diagnosis | ICD-10-CM |
| C54 | Malignant neoplasm of corpus uteri | Diagnosis | ICD-10-CM |
| C54.0 | Malignant neoplasm of isthmus uteri | Diagnosis | ICD-10-CM |
| C54.1 | Malignant neoplasm of endometrium | Diagnosis | ICD-10-CM |
| C54.2 | Malignant neoplasm of myometrium | Diagnosis | ICD-10-CM |
| C54.3 | Malignant neoplasm of fundus uteri | Diagnosis | ICD-10-CM |
| C54.8 | Malignant neoplasm of overlapping sites of corpus uteri | Diagnosis | ICD-10-CM |
| C54.9 | Malignant neoplasm of corpus uteri, unspecified | Diagnosis | ICD-10-CM |
| C55 | Malignant neoplasm of uterus, part unspecified | Diagnosis | ICD-10-CM |
| C56 | Malignant neoplasm of ovary | Diagnosis | ICD-10-CM |
| C56.1 | Malignant neoplasm of right ovary | Diagnosis | ICD-10-CM |
| C56.2 | Malignant neoplasm of left ovary | Diagnosis | ICD-10-CM |
| C56.9 | Malignant neoplasm of unspecified ovary | Diagnosis | ICD-10-CM |
| C57 | Malignant neoplasm of other and unspecified female genital organs | Diagnosis | ICD-10-CM |
| C57.0 | Malignant neoplasm of fallopian tube | Diagnosis | ICD-10-CM |
| C57.00 | Malignant neoplasm of unspecified fallopian tube | Diagnosis | ICD-10-CM |
| C57.01 | Malignant neoplasm of right fallopian tube | Diagnosis | ICD-10-CM |
| C57.02 | Malignant neoplasm of left fallopian tube | Diagnosis | ICD-10-CM |
| C57.1 | Malignant neoplasm of broad ligament | Diagnosis | ICD-10-CM |
| C57.10 | Malignant neoplasm of unspecified broad ligament | Diagnosis | ICD-10-CM |
| C57.11 | Malignant neoplasm of right broad ligament | Diagnosis | ICD-10-CM |
| C57.12 | Malignant neoplasm of left broad ligament | Diagnosis | ICD-10-CM |
| C57.2 | Malignant neoplasm of round ligament | Diagnosis | ICD-10-CM |
| C57.20 | Malignant neoplasm of unspecified round ligament | Diagnosis | ICD-10-CM |
| C57.21 | Malignant neoplasm of right round ligament | Diagnosis | ICD-10-CM |
| C57.22 | Malignant neoplasm of left round ligament | Diagnosis | ICD-10-CM |
| C57.3 | Malignant neoplasm of parametrium | Diagnosis | ICD-10-CM |
| C57.4 | Malignant neoplasm of uterine adnexa, unspecified | Diagnosis | ICD-10-CM |
| C57.7 | Malignant neoplasm of other specified female genital organs | Diagnosis | ICD-10-CM |
| C57.8 | Malignant neoplasm of overlapping sites of female genital organs | Diagnosis | ICD-10-CM |
| C57.9 | Malignant neoplasm of female genital organ, unspecified | Diagnosis | ICD-10-CM |
| C58 | Malignant neoplasm of placenta | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| C60 | Malignant neoplasm of penis | Diagnosis | ICD-10-CM |
| C60.0 | Malignant neoplasm of prepuce | Diagnosis | ICD-10-CM |
| C60.1 | Malignant neoplasm of glans penis | Diagnosis | ICD-10-CM |
| C60.2 | Malignant neoplasm of body of penis | Diagnosis | ICD-10-CM |
| C60.8 | Malignant neoplasm of overlapping sites of penis | Diagnosis | ICD-10-CM |
| C60.9 | Malignant neoplasm of penis, unspecified | Diagnosis | ICD-10-CM |
| C61 | Malignant neoplasm of prostate | Diagnosis | ICD-10-CM |
| C62 | Malignant neoplasm of testis | Diagnosis | ICD-10-CM |
| C62.0 | Malignant neoplasm of undescended testis | Diagnosis | ICD-10-CM |
| C62.00 | Malignant neoplasm of unspecified undescended testis | Diagnosis | ICD-10-CM |
| C62.01 | Malignant neoplasm of undescended right testis | Diagnosis | ICD-10-CM |
| C62.02 | Malignant neoplasm of undescended left testis | Diagnosis | ICD-10-CM |
| C62.1 | Malignant neoplasm of descended testis | Diagnosis | ICD-10-CM |
| C62.10 | Malignant neoplasm of unspecified descended testis | Diagnosis | ICD-10-CM |
| C62.11 | Malignant neoplasm of descended right testis | Diagnosis | ICD-10-CM |
| C62.12 | Malignant neoplasm of descended left testis | Diagnosis | ICD-10-CM |
| C62.9 | Malignant neoplasm of testis, unspecified whether descended or undescended | Diagnosis | ICD-10-CM |
| C62.90 | Malignant neoplasm of unspecified testis, unspecified whether descended or | Diagnosis | ICD-10-CM |
| C62.91 | Malignant neoplasm of right testis, unspecified whether descended or undescended | Diagnosis | ICD-10-CM |
| C62.92 | Malignant neoplasm of left testis, unspecified whether descended or undescended | Diagnosis | ICD-10-CM |
| C63 | Malignant neoplasm of other and unspecified male genital organs | Diagnosis | ICD-10-CM |
| C63.0 | Malignant neoplasm of epididymis | Diagnosis | ICD-10-CM |
| C63.00 | Malignant neoplasm of unspecified epididymis | Diagnosis | ICD-10-CM |
| C63.01 | Malignant neoplasm of right epididymis | Diagnosis | ICD-10-CM |
| C63.02 | Malignant neoplasm of left epididymis | Diagnosis | ICD-10-CM |
| C63.1 | Malignant neoplasm of spermatic cord | Diagnosis | ICD-10-CM |
| C63.10 | Malignant neoplasm of unspecified spermatic cord | Diagnosis | ICD-10-CM |
| C63.11 | Malignant neoplasm of right spermatic cord | Diagnosis | ICD-10-CM |
| C63.12 | Malignant neoplasm of left spermatic cord | Diagnosis | ICD-10-CM |
| C63.2 | Malignant neoplasm of scrotum | Diagnosis | ICD-10-CM |
| C63.7 | Malignant neoplasm of other specified male genital organs | Diagnosis | ICD-10-CM |
| C63.8 | Malignant neoplasm of overlapping sites of male genital organs | Diagnosis | ICD-10-CM |
| C63.9 | Malignant neoplasm of male genital organ, unspecified | Diagnosis | ICD-10-CM |
| C64 | Malignant neoplasm of kidney, except renal pelvis | Diagnosis | ICD-10-CM |
| C64.1 | Malignant neoplasm of right kidney, except renal pelvis | Diagnosis | ICD-10-CM |
| C64.2 | Malignant neoplasm of left kidney, except renal pelvis | Diagnosis | ICD-10-CM |
| C64.9 | Malignant neoplasm of unspecified kidney, except renal pelvis | Diagnosis | ICD-10-CM |
| C65 | Malignant neoplasm of renal pelvis | Diagnosis | ICD-10-CM |
| C65.1 | Malignant neoplasm of right renal pelvis | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| C65.2 | Malignant neoplasm of left renal pelvis | Diagnosis | ICD-10-CM |
| C65.9 | Malignant neoplasm of unspecified renal pelvis | Diagnosis | ICD-10-CM |
| C66 | Malignant neoplasm of ureter | Diagnosis | ICD-10-CM |
| C66.1 | Malignant neoplasm of right ureter | Diagnosis | ICD-10-CM |
| C66.2 | Malignant neoplasm of left ureter | Diagnosis | ICD-10-CM |
| C66.9 | Malignant neoplasm of unspecified ureter | Diagnosis | ICD-10-CM |
| C67 | Malignant neoplasm of bladder | Diagnosis | ICD-10-CM |
| C67.0 | Malignant neoplasm of trigone of bladder | Diagnosis | ICD-10-CM |
| C67.1 | Malignant neoplasm of dome of bladder | Diagnosis | ICD-10-CM |
| C67.2 | Malignant neoplasm of lateral wall of bladder | Diagnosis | ICD-10-CM |
| C67.3 | Malignant neoplasm of anterior wall of bladder | Diagnosis | ICD-10-CM |
| C67.4 | Malignant neoplasm of posterior wall of bladder | Diagnosis | ICD-10-CM |
| C67.5 | Malignant neoplasm of bladder neck | Diagnosis | ICD-10-CM |
| C67.6 | Malignant neoplasm of ureteric orifice | Diagnosis | ICD-10-CM |
| C67.7 | Malignant neoplasm of urachus | Diagnosis | ICD-10-CM |
| C67.8 | Malignant neoplasm of overlapping sites of bladder | Diagnosis | ICD-10-CM |
| C67.9 | Malignant neoplasm of bladder, unspecified | Diagnosis | ICD-10-CM |
| C68 | Malignant neoplasm of other and unspecified urinary organs | Diagnosis | ICD-10-CM |
| C68.0 | Malignant neoplasm of urethra | Diagnosis | ICD-10-CM |
| C68.1 | Malignant neoplasm of paraurethral glands | Diagnosis | ICD-10-CM |
| C68.8 | Malignant neoplasm of overlapping sites of urinary organs | Diagnosis | ICD-10-CM |
| C68.9 | Malignant neoplasm of urinary organ, unspecified | Diagnosis | ICD-10-CM |
| C69 | Malignant neoplasm of eye and adnexa | Diagnosis | ICD-10-CM |
| C69.0 | Malignant neoplasm of conjunctiva | Diagnosis | ICD-10-CM |
| C69.00 | Malignant neoplasm of unspecified conjunctiva | Diagnosis | ICD-10-CM |
| C69.01 | Malignant neoplasm of right conjunctiva | Diagnosis | ICD-10-CM |
| C69.02 | Malignant neoplasm of left conjunctiva | Diagnosis | ICD-10-CM |
| C69.1 | Malignant neoplasm of cornea | Diagnosis | ICD-10-CM |
| C69.10 | Malignant neoplasm of unspecified cornea | Diagnosis | ICD-10-CM |
| C69.11 | Malignant neoplasm of right cornea | Diagnosis | ICD-10-CM |
| C69.12 | Malignant neoplasm of left cornea | Diagnosis | ICD-10-CM |
| C69.2 | Malignant neoplasm of retina | Diagnosis | ICD-10-CM |
| C69.20 | Malignant neoplasm of unspecified retina | Diagnosis | ICD-10-CM |
| C69.21 | Malignant neoplasm of right retina | Diagnosis | ICD-10-CM |
| C69.22 | Malignant neoplasm of left retina | Diagnosis | ICD-10-CM |
| C69.3 | Malignant neoplasm of choroid | Diagnosis | ICD-10-CM |
| C69.30 | Malignant neoplasm of unspecified choroid | Diagnosis | ICD-10-CM |
| C69.31 | Malignant neoplasm of right choroid | Diagnosis | ICD-10-CM |
| C69.32 | Malignant neoplasm of left choroid | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| C69.4 | Malignant neoplasm of ciliary body | Diagnosis | ICD-10-CM |
| C69.40 | Malignant neoplasm of unspecified ciliary body | Diagnosis | ICD-10-CM |
| C69.41 | Malignant neoplasm of right ciliary body | Diagnosis | ICD-10-CM |
| C69.42 | Malignant neoplasm of left ciliary body | Diagnosis | ICD-10-CM |
| C69.5 | Malignant neoplasm of lacrimal gland and duct | Diagnosis | ICD-10-CM |
| C69.50 | Malignant neoplasm of unspecified lacrimal gland and duct | Diagnosis | ICD-10-CM |
| C69.51 | Malignant neoplasm of right lacrimal gland and duct | Diagnosis | ICD-10-CM |
| C69.52 | Malignant neoplasm of left lacrimal gland and duct | Diagnosis | ICD-10-CM |
| C69.6 | Malignant neoplasm of orbit | Diagnosis | ICD-10-CM |
| C69.60 | Malignant neoplasm of unspecified orbit | Diagnosis | ICD-10-CM |
| C69.61 | Malignant neoplasm of right orbit | Diagnosis | ICD-10-CM |
| C69.62 | Malignant neoplasm of left orbit | Diagnosis | ICD-10-CM |
| C69.8 | Malignant neoplasm of overlapping sites of eye and adnexa | Diagnosis | ICD-10-CM |
| C69.80 | Malignant neoplasm of overlapping sites of unspecified eye and adnexa | Diagnosis | ICD-10-CM |
| C69.81 | Malignant neoplasm of overlapping sites of right eye and adnexa | Diagnosis | ICD-10-CM |
| C69.82 | Malignant neoplasm of overlapping sites of left eye and adnexa | Diagnosis | ICD-10-CM |
| C69.9 | Malignant neoplasm of unspecified site of eye | Diagnosis | ICD-10-CM |
| C69.90 | Malignant neoplasm of unspecified site of unspecified eye | Diagnosis | ICD-10-CM |
| C69.91 | Malignant neoplasm of unspecified site of right eye | Diagnosis | ICD-10-CM |
| C69.92 | Malignant neoplasm of unspecified site of left eye | Diagnosis | ICD-10-CM |
| C70 | Malignant neoplasm of meninges | Diagnosis | ICD-10-CM |
| C70.0 | Malignant neoplasm of cerebral meninges | Diagnosis | ICD-10-CM |
| C70.1 | Malignant neoplasm of spinal meninges | Diagnosis | ICD-10-CM |
| C70.9 | Malignant neoplasm of meninges, unspecified | Diagnosis | ICD-10-CM |
| C71 | Malignant neoplasm of brain | Diagnosis | ICD-10-CM |
| C71.0 | Malignant neoplasm of cerebrum, except lobes and ventricles | Diagnosis | ICD-10-CM |
| C71.1 | Malignant neoplasm of frontal lobe | Diagnosis | ICD-10-CM |
| C71.2 | Malignant neoplasm of temporal lobe | Diagnosis | ICD-10-CM |
| C71.3 | Malignant neoplasm of parietal lobe | Diagnosis | ICD-10-CM |
| C71.4 | Malignant neoplasm of occipital lobe | Diagnosis | ICD-10-CM |
| C71.5 | Malignant neoplasm of cerebral ventricle | Diagnosis | ICD-10-CM |
| C71.6 | Malignant neoplasm of cerebellum | Diagnosis | ICD-10-CM |
| C71.7 | Malignant neoplasm of brain stem | Diagnosis | ICD-10-CM |
| C71.8 | Malignant neoplasm of overlapping sites of brain | Diagnosis | ICD-10-CM |
| C71.9 | Malignant neoplasm of brain, unspecified | Diagnosis | ICD-10-CM |
| C72 | Malignant neoplasm of spinal cord, cranial nerves and other parts of central nervous | Diagnosis | ICD-10-CM |
| C72.0 | Malignant neoplasm of spinal cord | Diagnosis | ICD-10-CM |
| C72.1 | Malignant neoplasm of cauda equina | Diagnosis | ICD-10-CM |
| C72.2 | Malignant neoplasm of olfactory nerve | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C72.20 | Malignant neoplasm of unspecified olfactory nerve | Diagnosis | ICD-10-CM |
| C72.21 | Malignant neoplasm of right olfactory nerve | Diagnosis | ICD-10-CM |
| C72.22 | Malignant neoplasm of left olfactory nerve | Diagnosis | ICD-10-CM |
| C72.3 | Malignant neoplasm of optic nerve | Diagnosis | ICD-10-CM |
| C72.30 | Malignant neoplasm of unspecified optic nerve | Diagnosis | ICD-10-CM |
| C72.31 | Malignant neoplasm of right optic nerve | Diagnosis | ICD-10-CM |
| C72.32 | Malignant neoplasm of left optic nerve | Diagnosis | ICD-10-CM |
| C72.4 | Malignant neoplasm of acoustic nerve | Diagnosis | ICD-10-CM |
| C72.40 | Malignant neoplasm of unspecified acoustic nerve | Diagnosis | ICD-10-CM |
| C72.41 | Malignant neoplasm of right acoustic nerve | Diagnosis | ICD-10-CM |
| C72.42 | Malignant neoplasm of left acoustic nerve | Diagnosis | ICD-10-CM |
| C72.5 | Malignant neoplasm of other and unspecified cranial nerves | Diagnosis | ICD-10-CM |
| C72.50 | Malignant neoplasm of unspecified cranial nerve | Diagnosis | ICD-10-CM |
| C72.59 | Malignant neoplasm of other cranial nerves | Diagnosis | ICD-10-CM |
| C72.9 | Malignant neoplasm of central nervous system, unspecified | Diagnosis | ICD-10-CM |
| C73 | Malignant neoplasm of thyroid gland | Diagnosis | ICD-10-CM |
| C74 | Malignant neoplasm of adrenal gland | Diagnosis | ICD-10-CM |
| C74.0 | Malignant neoplasm of cortex of adrenal gland | Diagnosis | ICD-10-CM |
| C74.00 | Malignant neoplasm of cortex of unspecified adrenal gland | Diagnosis | ICD-10-CM |
| C74.01 | Malignant neoplasm of cortex of right adrenal gland | Diagnosis | ICD-10-CM |
| C74.02 | Malignant neoplasm of cortex of left adrenal gland | Diagnosis | ICD-10-CM |
| C74.1 | Malignant neoplasm of medulla of adrenal gland | Diagnosis | ICD-10-CM |
| C74.10 | Malignant neoplasm of medulla of unspecified adrenal gland | Diagnosis | ICD-10-CM |
| C74.11 | Malignant neoplasm of medulla of right adrenal gland | Diagnosis | ICD-10-CM |
| C74.12 | Malignant neoplasm of medulla of left adrenal gland | Diagnosis | ICD-10-CM |
| C74.9 | Malignant neoplasm of unspecified part of adrenal gland | Diagnosis | ICD-10-CM |
| C74.90 | Malignant neoplasm of unspecified part of unspecified adrenal gland | Diagnosis | ICD-10-CM |
| C74.91 | Malignant neoplasm of unspecified part of right adrenal gland | Diagnosis | ICD-10-CM |
| C74.92 | Malignant neoplasm of unspecified part of left adrenal gland | Diagnosis | ICD-10-CM |
| C75 | Malignant neoplasm of other endocrine glands and related structures | Diagnosis | ICD-10-CM |
| C75.0 | Malignant neoplasm of parathyroid gland | Diagnosis | ICD-10-CM |
| C75.1 | Malignant neoplasm of pituitary gland | Diagnosis | ICD-10-CM |
| C75.2 | Malignant neoplasm of craniopharyngeal duct | Diagnosis | ICD-10-CM |
| C75.3 | Malignant neoplasm of pineal gland | Diagnosis | ICD-10-CM |
| C75.4 | Malignant neoplasm of carotid body | Diagnosis | ICD-10-CM |
| C75.5 | Malignant neoplasm of aortic body and other paraganglia | Diagnosis | ICD-10-CM |
| C75.8 | Malignant neoplasm with pluriglandular involvement, unspecified | Diagnosis | ICD-10-CM |
| C75.9 | Malignant neoplasm of endocrine gland, unspecified | Diagnosis | ICD-10-CM |
| C76 | Malignant neoplasm of other and ill-defined sites | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| C76.0 | Malignant neoplasm of head, face and neck | Diagnosis | ICD-10-CM |
| C76.1 | Malignant neoplasm of thorax | Diagnosis | ICD-10-CM |
| C76.2 | Malignant neoplasm of abdomen | Diagnosis | ICD-10-CM |
| C76.3 | Malignant neoplasm of pelvis | Diagnosis | ICD-10-CM |
| C76.4 | Malignant neoplasm of upper limb | Diagnosis | ICD-10-CM |
| C76.40 | Malignant neoplasm of unspecified upper limb | Diagnosis | ICD-10-CM |
| C76.41 | Malignant neoplasm of right upper limb | Diagnosis | ICD-10-CM |
| C76.42 | Malignant neoplasm of left upper limb | Diagnosis | ICD-10-CM |
| C76.5 | Malignant neoplasm of lower limb | Diagnosis | ICD-10-CM |
| C76.50 | Malignant neoplasm of unspecified lower limb | Diagnosis | ICD-10-CM |
| C76.51 | Malignant neoplasm of right lower limb | Diagnosis | ICD-10-CM |
| C76.52 | Malignant neoplasm of left lower limb | Diagnosis | ICD-10-CM |
| C76.8 | Malignant neoplasm of other specified ill-defined sites | Diagnosis | ICD-10-CM |
| C77 | Secondary and unspecified malignant neoplasm of lymph nodes | Diagnosis | ICD-10-CM |
| C77.0 | Secondary and unspecified malignant neoplasm of lymph nodes of head, face and neck | Diagnosis | ICD-10-CM |
| C77.1 | Secondary and unspecified malignant neoplasm of intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C77.2 | Secondary and unspecified malignant neoplasm of intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C77.3 | Secondary and unspecified malignant neoplasm of axilla and upper limb lymph nodes | Diagnosis | ICD-10-CM |
| C77.4 | Secondary and unspecified malignant neoplasm of inguinal and lower limb lymph | Diagnosis | ICD-10-CM |
| C77.5 | Secondary and unspecified malignant neoplasm of intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C77.8 | Secondary and unspecified malignant neoplasm of lymph nodes of multiple regions | Diagnosis | ICD-10-CM |
| C77.9 | Secondary and unspecified malignant neoplasm of lymph node, unspecified | Diagnosis | ICD-10-CM |
| C78 | Secondary malignant neoplasm of respiratory and digestive organs | Diagnosis | ICD-10-CM |
| C78.0 | Secondary malignant neoplasm of lung | Diagnosis | ICD-10-CM |
| C78.00 | Secondary malignant neoplasm of unspecified lung | Diagnosis | ICD-10-CM |
| C78.01 | Secondary malignant neoplasm of right lung | Diagnosis | ICD-10-CM |
| C78.02 | Secondary malignant neoplasm of left lung | Diagnosis | ICD-10-CM |
| C78.1 | Secondary malignant neoplasm of mediastinum | Diagnosis | ICD-10-CM |
| C78.2 | Secondary malignant neoplasm of pleura | Diagnosis | ICD-10-CM |
| C78.3 | Secondary malignant neoplasm of other and unspecified respiratory organs | Diagnosis | ICD-10-CM |
| C78.30 | Secondary malignant neoplasm of unspecified respiratory organ | Diagnosis | ICD-10-CM |
| C78.39 | Secondary malignant neoplasm of other respiratory organs | Diagnosis | ICD-10-CM |
| C78.4 | Secondary malignant neoplasm of small intestine | Diagnosis | ICD-10-CM |
| C78.5 | Secondary malignant neoplasm of large intestine and rectum | Diagnosis | ICD-10-CM |
| C78.6 | Secondary malignant neoplasm of retroperitoneum and peritoneum | Diagnosis | ICD-10-CM |
| C78.7 | Secondary malignant neoplasm of liver and intrahepatic bile duct | Diagnosis | ICD-10-CM |
| C78.8 | Secondary malignant neoplasm of other and unspecified digestive organs | Diagnosis | ICD-10-CM |
| C78.80 | Secondary malignant neoplasm of unspecified digestive organ | Diagnosis | ICD-10-CM |
| C78.89 | Secondary malignant neoplasm of other digestive organs | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| C79 | Secondary malignant neoplasm of other and unspecified sites | Diagnosis | ICD-10-CM |
| C79.0 | Secondary malignant neoplasm of kidney and renal pelvis | Diagnosis | ICD-10-CM |
| C79.00 | Secondary malignant neoplasm of unspecified kidney and renal pelvis | Diagnosis | ICD-10-CM |
| C79.01 | Secondary malignant neoplasm of right kidney and renal pelvis | Diagnosis | ICD-10-CM |
| C79.02 | Secondary malignant neoplasm of left kidney and renal pelvis | Diagnosis | ICD-10-CM |
| C79.1 | Secondary malignant neoplasm of bladder and other and unspecified urinary organs | Diagnosis | ICD-10-CM |
| C79.10 | Secondary malignant neoplasm of unspecified urinary organs | Diagnosis | ICD-10-CM |
| C79.11 | Secondary malignant neoplasm of bladder | Diagnosis | ICD-10-CM |
| C79.19 | Secondary malignant neoplasm of other urinary organs | Diagnosis | ICD-10-CM |
| C79.2 | Secondary malignant neoplasm of skin | Diagnosis | ICD-10-CM |
| C79.3 | Secondary malignant neoplasm of brain and cerebral meninges | Diagnosis | ICD-10-CM |
| C79.31 | Secondary malignant neoplasm of brain | Diagnosis | ICD-10-CM |
| C79.32 | Secondary malignant neoplasm of cerebral meninges | Diagnosis | ICD-10-CM |
| C79.4 | Secondary malignant neoplasm of other and unspecified parts of nervous system | Diagnosis | ICD-10-CM |
| C79.40 | Secondary malignant neoplasm of unspecified part of nervous system | Diagnosis | ICD-10-CM |
| C79.49 | Secondary malignant neoplasm of other parts of nervous system | Diagnosis | ICD-10-CM |
| C79.5 | Secondary malignant neoplasm of bone and bone marrow | Diagnosis | ICD-10-CM |
| C79.51 | Secondary malignant neoplasm of bone | Diagnosis | ICD-10-CM |
| C79.52 | Secondary malignant neoplasm of bone marrow | Diagnosis | ICD-10-CM |
| C79.6 | Secondary malignant neoplasm of ovary | Diagnosis | ICD-10-CM |
| C79.60 | Secondary malignant neoplasm of unspecified ovary | Diagnosis | ICD-10-CM |
| C79.61 | Secondary malignant neoplasm of right ovary | Diagnosis | ICD-10-CM |
| C79.62 | Secondary malignant neoplasm of left ovary | Diagnosis | ICD-10-CM |
| C79.7 | Secondary malignant neoplasm of adrenal gland | Diagnosis | ICD-10-CM |
| C79.70 | Secondary malignant neoplasm of unspecified adrenal gland | Diagnosis | ICD-10-CM |
| C79.71 | Secondary malignant neoplasm of right adrenal gland | Diagnosis | ICD-10-CM |
| C79.72 | Secondary malignant neoplasm of left adrenal gland | Diagnosis | ICD-10-CM |
| C79.8 | Secondary malignant neoplasm of other specified sites | Diagnosis | ICD-10-CM |
| C79.81 | Secondary malignant neoplasm of breast | Diagnosis | ICD-10-CM |
| C79.82 | Secondary malignant neoplasm of genital organs | Diagnosis | ICD-10-CM |
| C79.89 | Secondary malignant neoplasm of other specified sites | Diagnosis | ICD-10-CM |
| C79.9 | Secondary malignant neoplasm of unspecified site | Diagnosis | ICD-10-CM |
| C7A | Malignant neuroendocrine tumors | Diagnosis | ICD-10-CM |
| C7A.0 | Malignant carcinoid tumors | Diagnosis | ICD-10-CM |
| C7A.00 | Malignant carcinoid tumor of unspecified site | Diagnosis | ICD-10-CM |
| C7A.01 | Malignant carcinoid tumors of the small intestine | Diagnosis | ICD-10-CM |
| C7A.010 | Malignant carcinoid tumor of the duodenum | Diagnosis | ICD-10-CM |
| C7A.011 | Malignant carcinoid tumor of the jejunum | Diagnosis | ICD-10-CM |
| C7A.012 | Malignant carcinoid tumor of the ileum | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| C7A.019 | Malignant carcinoid tumor of the small intestine, unspecified portion | Diagnosis | ICD-10-CM |
| C7A.02 | Malignant carcinoid tumors of the appendix, large intestine, and rectum | Diagnosis | ICD-10-CM |
| C7A.020 | Malignant carcinoid tumor of the appendix | Diagnosis | ICD-10-CM |
| C7A.021 | Malignant carcinoid tumor of the cecum | Diagnosis | ICD-10-CM |
| C7A.022 | Malignant carcinoid tumor of the ascending colon | Diagnosis | ICD-10-CM |
| C7A.023 | Malignant carcinoid tumor of the transverse colon | Diagnosis | ICD-10-CM |
| C7A.024 | Malignant carcinoid tumor of the descending colon | Diagnosis | ICD-10-CM |
| C7A.025 | Malignant carcinoid tumor of the sigmoid colon | Diagnosis | ICD-10-CM |
| C7A.026 | Malignant carcinoid tumor of the rectum | Diagnosis | ICD-10-CM |
| C7A.029 | Malignant carcinoid tumor of the large intestine, unspecified portion | Diagnosis | ICD-10-CM |
| C7A.09 | Malignant carcinoid tumors of other sites | Diagnosis | ICD-10-CM |
| C7A.090 | Malignant carcinoid tumor of the bronchus and lung | Diagnosis | ICD-10-CM |
| C7A.091 | Malignant carcinoid tumor of the thymus | Diagnosis | ICD-10-CM |
| C7A.092 | Malignant carcinoid tumor of the stomach | Diagnosis | ICD-10-CM |
| C7A.093 | Malignant carcinoid tumor of the kidney | Diagnosis | ICD-10-CM |
| C7A.094 | Malignant carcinoid tumor of the foregut, unspecified | Diagnosis | ICD-10-CM |
| C7A.095 | Malignant carcinoid tumor of the midgut, unspecified | Diagnosis | ICD-10-CM |
| C7A.096 | Malignant carcinoid tumor of the hindgut, unspecified | Diagnosis | ICD-10-CM |
| C7A.098 | Malignant carcinoid tumors of other sites | Diagnosis | ICD-10-CM |
| C7A.1 | Malignant poorly differentiated neuroendocrine tumors | Diagnosis | ICD-10-CM |
| C7A.8 | Other malignant neuroendocrine tumors | Diagnosis | ICD-10-CM |
| C7B | Secondary neuroendocrine tumors | Diagnosis | ICD-10-CM |
| C7B.0 | Secondary carcinoid tumors | Diagnosis | ICD-10-CM |
| C7B.00 | Secondary carcinoid tumors, unspecified site | Diagnosis | ICD-10-CM |
| C7B.01 | Secondary carcinoid tumors of distant lymph nodes | Diagnosis | ICD-10-CM |
| C7B.02 | Secondary carcinoid tumors of liver | Diagnosis | ICD-10-CM |
| C7B.03 | Secondary carcinoid tumors of bone | Diagnosis | ICD-10-CM |
| C7B.04 | Secondary carcinoid tumors of peritoneum | Diagnosis | ICD-10-CM |
| C7B.09 | Secondary carcinoid tumors of other sites | Diagnosis | ICD-10-CM |
| C7B.1 | Secondary Merkel cell carcinoma | Diagnosis | ICD-10-CM |
| C7B.8 | Other secondary neuroendocrine tumors | Diagnosis | ICD-10-CM |
| C80 | Malignant neoplasm without specification of site | Diagnosis | ICD-10-CM |
| C80.0 | Disseminated malignant neoplasm, unspecified | Diagnosis | ICD-10-CM |
| C80.1 | Malignant (primary) neoplasm, unspecified | Diagnosis | ICD-10-CM |
| C80.2 | Malignant neoplasm associated with transplanted organ | Diagnosis | ICD-10-CM |
| C81 | Hodgkin lymphoma | Diagnosis | ICD-10-CM |
| C81.0 | Nodular lymphocyte predominant Hodgkin lymphoma | Diagnosis | ICD-10-CM |
| C81.00 | Nodular lymphocyte predominant Hodgkin lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C81.01 | Nodular lymphocyte predominant Hodgkin lymphoma, lymph nodes of head, face, and | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C81.02 | Nodular lymphocyte predominant Hodgkin lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C81.03 | Nodular lymphocyte predominant Hodgkin lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C81.04 | Nodular lymphocyte predominant Hodgkin lymphoma, lymph nodes of axilla and | Diagnosis | ICD-10-CM |
| C81.05 | Nodular lymphocyte predominant Hodgkin lymphoma, lymph nodes of inguinal region | Diagnosis | ICD-10-CM |
| C81.06 | Nodular lymphocyte predominant Hodgkin lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C81.07 | Nodular lymphocyte predominant Hodgkin lymphoma, spleen | Diagnosis | ICD-10-CM |
| C81.08 | Nodular lymphocyte predominant Hodgkin lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C81.09 | Nodular lymphocyte predominant Hodgkin lymphoma, extranodal and solid organ | Diagnosis | ICD-10-CM |
| C81.1 | Nodular sclerosis Hodgkin lymphoma | Diagnosis | ICD-10-CM |
| C81.10 | Nodular sclerosis Hodgkin lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C81.11 | Nodular sclerosis Hodgkin lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C81.12 | Nodular sclerosis Hodgkin lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C81.13 | Nodular sclerosis Hodgkin lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C81.14 | Nodular sclerosis Hodgkin lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C81.15 | Nodular sclerosis Hodgkin lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C81.16 | Nodular sclerosis Hodgkin lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C81.17 | Nodular sclerosis Hodgkin lymphoma, spleen | Diagnosis | ICD-10-CM |
| C81.18 | Nodular sclerosis Hodgkin lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C81.19 | Nodular sclerosis Hodgkin lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C81.2 | Mixed cellularity Hodgkin lymphoma | Diagnosis | ICD-10-CM |
| C81.20 | Mixed cellularity Hodgkin lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C81.21 | Mixed cellularity Hodgkin lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C81.22 | Mixed cellularity Hodgkin lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C81.23 | Mixed cellularity Hodgkin lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C81.24 | Mixed cellularity Hodgkin lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C81.25 | Mixed cellularity Hodgkin lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C81.26 | Mixed cellularity Hodgkin lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C81.27 | Mixed cellularity Hodgkin lymphoma, spleen | Diagnosis | ICD-10-CM |
| C81.28 | Mixed cellularity Hodgkin lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C81.29 | Mixed cellularity Hodgkin lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C81.3 | Lymphocyte depleted Hodgkin lymphoma | Diagnosis | ICD-10-CM |
| C81.30 | Lymphocyte depleted Hodgkin lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C81.31 | Lymphocyte depleted Hodgkin lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C81.32 | Lymphocyte depleted Hodgkin lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C81.33 | Lymphocyte depleted Hodgkin lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C81.34 | Lymphocyte depleted Hodgkin lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C81.35 | Lymphocyte depleted Hodgkin lymphoma, lymph nodes of inguinal region and lower | Diagnosis | ICD-10-CM |
| C81.36 | Lymphocyte depleted Hodgkin lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C81.37 | Lymphocyte depleted Hodgkin lymphoma, spleen | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C81.38 | Lymphocyte depleted Hodgkin lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C81.39 | Lymphocyte depleted Hodgkin lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C81.4 | Lymphocyte-rich Hodgkin lymphoma | Diagnosis | ICD-10-CM |
| C81.40 | Lymphocyte-rich Hodgkin lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C81.41 | Lymphocyte-rich Hodgkin lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C81.42 | Lymphocyte-rich Hodgkin lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C81.43 | Lymphocyte-rich Hodgkin lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C81.44 | Lymphocyte-rich Hodgkin lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C81.45 | Lymphocyte-rich Hodgkin lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C81.46 | Lymphocyte-rich Hodgkin lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C81.47 | Lymphocyte-rich Hodgkin lymphoma, spleen | Diagnosis | ICD-10-CM |
| C81.48 | Lymphocyte-rich Hodgkin lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C81.49 | Lymphocyte-rich Hodgkin lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C81.7 | Other Hodgkin lymphoma | Diagnosis | ICD-10-CM |
| C81.70 | Other Hodgkin lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C81.71 | Other Hodgkin lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C81.72 | Other Hodgkin lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C81.73 | Other Hodgkin lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C81.74 | Other Hodgkin lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C81.75 | Other Hodgkin lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C81.76 | Other Hodgkin lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C81.77 | Other Hodgkin lymphoma, spleen | Diagnosis | ICD-10-CM |
| C81.78 | Other Hodgkin lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C81.79 | Other Hodgkin lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C81.9 | Hodgkin lymphoma, unspecified | Diagnosis | ICD-10-CM |
| C81.90 | Hodgkin lymphoma, unspecified, unspecified site | Diagnosis | ICD-10-CM |
| C81.91 | Hodgkin lymphoma, unspecified, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C81.92 | Hodgkin lymphoma, unspecified, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C81.93 | Hodgkin lymphoma, unspecified, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C81.94 | Hodgkin lymphoma, unspecified, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C81.95 | Hodgkin lymphoma, unspecified, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C81.96 | Hodgkin lymphoma, unspecified, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C81.97 | Hodgkin lymphoma, unspecified, spleen | Diagnosis | ICD-10-CM |
| C81.98 | Hodgkin lymphoma, unspecified, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C81.99 | Hodgkin lymphoma, unspecified, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C82 | Follicular lymphoma | Diagnosis | ICD-10-CM |
| C82.0 | Follicular lymphoma grade I | Diagnosis | ICD-10-CM |
| C82.00 | Follicular lymphoma grade I, unspecified site | Diagnosis | ICD-10-CM |
| C82.01 | Follicular lymphoma grade I, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| C82.02 | Follicular lymphoma grade I, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C82.03 | Follicular lymphoma grade I, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C82.04 | Follicular lymphoma grade I, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C82.05 | Follicular lymphoma grade I, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C82.06 | Follicular lymphoma grade I, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C82.07 | Follicular lymphoma grade I, spleen | Diagnosis | ICD-10-CM |
| C82.08 | Follicular lymphoma grade I, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C82.09 | Follicular lymphoma grade I, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C82.1 | Follicular lymphoma grade II | Diagnosis | ICD-10-CM |
| C82.10 | Follicular lymphoma grade II, unspecified site | Diagnosis | ICD-10-CM |
| C82.11 | Follicular lymphoma grade II, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C82.12 | Follicular lymphoma grade II, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C82.13 | Follicular lymphoma grade II, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C82.14 | Follicular lymphoma grade II, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C82.15 | Follicular lymphoma grade II, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C82.16 | Follicular lymphoma grade II, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C82.17 | Follicular lymphoma grade II, spleen | Diagnosis | ICD-10-CM |
| C82.18 | Follicular lymphoma grade II, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C82.19 | Follicular lymphoma grade II, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C82.2 | Follicular lymphoma grade III, unspecified | Diagnosis | ICD-10-CM |
| C82.20 | Follicular lymphoma grade III, unspecified, unspecified site | Diagnosis | ICD-10-CM |
| C82.21 | Follicular lymphoma grade III, unspecified, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C82.22 | Follicular lymphoma grade III, unspecified, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C82.23 | Follicular lymphoma grade III, unspecified, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C82.24 | Follicular lymphoma grade III, unspecified, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C82.25 | Follicular lymphoma grade III, unspecified, lymph nodes of inguinal region and lower | Diagnosis | ICD-10-CM |
| C82.26 | Follicular lymphoma grade III, unspecified, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C82.27 | Follicular lymphoma grade III, unspecified, spleen | Diagnosis | ICD-10-CM |
| C82.28 | Follicular lymphoma grade III, unspecified, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C82.29 | Follicular lymphoma grade III, unspecified, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C82.3 | Follicular lymphoma grade IIIa | Diagnosis | ICD-10-CM |
| C82.30 | Follicular lymphoma grade IIIa, unspecified site | Diagnosis | ICD-10-CM |
| C82.31 | Follicular lymphoma grade IIIa, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C82.32 | Follicular lymphoma grade IIIa, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C82.33 | Follicular lymphoma grade IIIa, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C82.34 | Follicular lymphoma grade IIIa, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C82.35 | Follicular lymphoma grade IIIa, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C82.36 | Follicular lymphoma grade IIIa, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C82.37 | Follicular lymphoma grade IIIa, spleen | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C82.38 | Follicular lymphoma grade IIIa, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C82.39 | Follicular lymphoma grade IIIa, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C82.4 | Follicular lymphoma grade IIIb | Diagnosis | ICD-10-CM |
| C82.40 | Follicular lymphoma grade IIIb, unspecified site | Diagnosis | ICD-10-CM |
| C82.41 | Follicular lymphoma grade IIIb, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C82.42 | Follicular lymphoma grade IIIb, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C82.43 | Follicular lymphoma grade IIIb, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C82.44 | Follicular lymphoma grade IIIb, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C82.45 | Follicular lymphoma grade IIIb, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C82.46 | Follicular lymphoma grade IIIb, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C82.47 | Follicular lymphoma grade IIIb, spleen | Diagnosis | ICD-10-CM |
| C82.48 | Follicular lymphoma grade IIIb, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C82.49 | Follicular lymphoma grade IIIb, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C82.5 | Diffuse follicle center lymphoma | Diagnosis | ICD-10-CM |
| C82.50 | Diffuse follicle center lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C82.51 | Diffuse follicle center lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C82.52 | Diffuse follicle center lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C82.53 | Diffuse follicle center lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C82.54 | Diffuse follicle center lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C82.55 | Diffuse follicle center lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C82.56 | Diffuse follicle center lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C82.57 | Diffuse follicle center lymphoma, spleen | Diagnosis | ICD-10-CM |
| C82.58 | Diffuse follicle center lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C82.59 | Diffuse follicle center lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C82.6 | Cutaneous follicle center lymphoma | Diagnosis | ICD-10-CM |
| C82.60 | Cutaneous follicle center lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C82.61 | Cutaneous follicle center lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C82.62 | Cutaneous follicle center lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C82.63 | Cutaneous follicle center lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C82.64 | Cutaneous follicle center lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C82.65 | Cutaneous follicle center lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C82.66 | Cutaneous follicle center lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C82.67 | Cutaneous follicle center lymphoma, spleen | Diagnosis | ICD-10-CM |
| C82.68 | Cutaneous follicle center lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C82.69 | Cutaneous follicle center lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C82.8 | Other types of follicular lymphoma | Diagnosis | ICD-10-CM |
| C82.80 | Other types of follicular lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C82.81 | Other types of follicular lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C82.82 | Other types of follicular lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C82.83 | Other types of follicular lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C82.84 | Other types of follicular lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C82.85 | Other types of follicular lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C82.86 | Other types of follicular lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C82.87 | Other types of follicular lymphoma, spleen | Diagnosis | ICD-10-CM |
| C82.88 | Other types of follicular lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C82.89 | Other types of follicular lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C82.9 | Follicular lymphoma, unspecified | Diagnosis | ICD-10-CM |
| C82.90 | Follicular lymphoma, unspecified, unspecified site | Diagnosis | ICD-10-CM |
| C82.91 | Follicular lymphoma, unspecified, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C82.92 | Follicular lymphoma, unspecified, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C82.93 | Follicular lymphoma, unspecified, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C82.94 | Follicular lymphoma, unspecified, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C82.95 | Follicular lymphoma, unspecified, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C82.96 | Follicular lymphoma, unspecified, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C82.97 | Follicular lymphoma, unspecified, spleen | Diagnosis | ICD-10-CM |
| C82.98 | Follicular lymphoma, unspecified, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C82.99 | Follicular lymphoma, unspecified, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C83 | Non-follicular lymphoma | Diagnosis | ICD-10-CM |
| C83.0 | Small cell B-cell lymphoma | Diagnosis | ICD-10-CM |
| C83.00 | Small cell B-cell lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C83.01 | Small cell B-cell lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C83.02 | Small cell B-cell lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C83.03 | Small cell B-cell lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C83.04 | Small cell B-cell lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C83.05 | Small cell B-cell lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C83.06 | Small cell B-cell lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C83.07 | Small cell B-cell lymphoma, spleen | Diagnosis | ICD-10-CM |
| C83.08 | Small cell B-cell lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C83.09 | Small cell B-cell lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C83.1 | Mantle cell lymphoma | Diagnosis | ICD-10-CM |
| C83.10 | Mantle cell lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C83.11 | Mantle cell lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C83.12 | Mantle cell lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C83.13 | Mantle cell lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C83.14 | Mantle cell lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C83.15 | Mantle cell lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C83.16 | Mantle cell lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C83.17 | Mantle cell lymphoma, spleen | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C83.18 | Mantle cell lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C83.19 | Mantle cell lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C83.3 | Diffuse large B-cell lymphoma | Diagnosis | ICD-10-CM |
| C83.30 | Diffuse large B-cell lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C83.31 | Diffuse large B-cell lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C83.32 | Diffuse large B-cell lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C83.33 | Diffuse large B-cell lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C83.34 | Diffuse large B-cell lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C83.35 | Diffuse large B-cell lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C83.36 | Diffuse large B-cell lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C83.37 | Diffuse large B-cell lymphoma, spleen | Diagnosis | ICD-10-CM |
| C83.38 | Diffuse large B-cell lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C83.39 | Diffuse large B-cell lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C83.5 | Lymphoblastic (diffuse) lymphoma | Diagnosis | ICD-10-CM |
| C83.50 | Lymphoblastic (diffuse) lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C83.51 | Lymphoblastic (diffuse) lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C83.52 | Lymphoblastic (diffuse) lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C83.53 | Lymphoblastic (diffuse) lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C83.54 | Lymphoblastic (diffuse) lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C83.55 | Lymphoblastic (diffuse) lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C83.56 | Lymphoblastic (diffuse) lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C83.57 | Lymphoblastic (diffuse) lymphoma, spleen | Diagnosis | ICD-10-CM |
| C83.58 | Lymphoblastic (diffuse) lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C83.59 | Lymphoblastic (diffuse) lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C83.7 | Burkitt lymphoma | Diagnosis | ICD-10-CM |
| C83.70 | Burkitt lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C83.71 | Burkitt lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C83.72 | Burkitt lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C83.73 | Burkitt lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C83.74 | Burkitt lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C83.75 | Burkitt lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C83.76 | Burkitt lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C83.77 | Burkitt lymphoma, spleen | Diagnosis | ICD-10-CM |
| C83.78 | Burkitt lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C83.79 | Burkitt lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C83.8 | Other non-follicular lymphoma | Diagnosis | ICD-10-CM |
| C83.80 | Other non-follicular lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C83.81 | Other non-follicular lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C83.82 | Other non-follicular lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| C83.83 | Other non-follicular lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C83.84 | Other non-follicular lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C83.85 | Other non-follicular lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C83.86 | Other non-follicular lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C83.87 | Other non-follicular lymphoma, spleen | Diagnosis | ICD-10-CM |
| C83.88 | Other non-follicular lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C83.89 | Other non-follicular lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C83.9 | Non-follicular (diffuse) lymphoma, unspecified | Diagnosis | ICD-10-CM |
| C83.90 | Non-follicular (diffuse) lymphoma, unspecified, unspecified site | Diagnosis | ICD-10-CM |
| C83.91 | Non-follicular (diffuse) lymphoma, unspecified, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C83.92 | Non-follicular (diffuse) lymphoma, unspecified, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C83.93 | Non-follicular (diffuse) lymphoma, unspecified, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C83.94 | Non-follicular (diffuse) lymphoma, unspecified, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C83.95 | Non-follicular (diffuse) lymphoma, unspecified, lymph nodes of inguinal region and | Diagnosis | ICD-10-CM |
| C83.96 | Non-follicular (diffuse) lymphoma, unspecified, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C83.97 | Non-follicular (diffuse) lymphoma, unspecified, spleen | Diagnosis | ICD-10-CM |
| C83.98 | Non-follicular (diffuse) lymphoma, unspecified, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C83.99 | Non-follicular (diffuse) lymphoma, unspecified, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C84 | Mature T/NK-cell lymphomas | Diagnosis | ICD-10-CM |
| C84.0 | Mycosis fungoides | Diagnosis | ICD-10-CM |
| C84.00 | Mycosis fungoides, unspecified site | Diagnosis | ICD-10-CM |
| C84.01 | Mycosis fungoides, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C84.02 | Mycosis fungoides, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C84.03 | Mycosis fungoides, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C84.04 | Mycosis fungoides, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C84.05 | Mycosis fungoides, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C84.06 | Mycosis fungoides, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C84.07 | Mycosis fungoides, spleen | Diagnosis | ICD-10-CM |
| C84.08 | Mycosis fungoides, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C84.09 | Mycosis fungoides, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C84.1 | Sezary disease | Diagnosis | ICD-10-CM |
| C84.10 | Sezary disease, unspecified site | Diagnosis | ICD-10-CM |
| C84.11 | Sezary disease, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C84.12 | Sezary disease, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C84.13 | Sezary disease, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C84.14 | Sezary disease, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C84.15 | Sezary disease, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C84.16 | Sezary disease, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C84.17 | Sezary disease, spleen | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| C84.18 | Sezary disease, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C84.19 | Sezary disease, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C84.4 | Peripheral T-cell lymphoma, not classified | Diagnosis | ICD-10-CM |
| C84.40 | Peripheral T-cell lymphoma, not classified, unspecified site | Diagnosis | ICD-10-CM |
| C84.41 | Peripheral T-cell lymphoma, not classified, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C84.42 | Peripheral T-cell lymphoma, not classified, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C84.43 | Peripheral T-cell lymphoma, not classified, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C84.44 | Peripheral T-cell lymphoma, not classified, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C84.45 | Peripheral T-cell lymphoma, not classified, lymph nodes of inguinal region and lower | Diagnosis | ICD-10-CM |
| C84.46 | Peripheral T-cell lymphoma, not classified, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C84.47 | Peripheral T-cell lymphoma, not classified, spleen | Diagnosis | ICD-10-CM |
| C84.48 | Peripheral T-cell lymphoma, not classified, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C84.49 | Peripheral T-cell lymphoma, not classified, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C84.6 | Anaplastic large cell lymphoma, ALK-positive | Diagnosis | ICD-10-CM |
| C84.60 | Anaplastic large cell lymphoma, ALK-positive, unspecified site | Diagnosis | ICD-10-CM |
| C84.61 | Anaplastic large cell lymphoma, ALK-positive, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C84.62 | Anaplastic large cell lymphoma, ALK-positive, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C84.63 | Anaplastic large cell lymphoma, ALK-positive, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C84.64 | Anaplastic large cell lymphoma, ALK-positive, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C84.65 | Anaplastic large cell lymphoma, ALK-positive, lymph nodes of inguinal region and | Diagnosis | ICD-10-CM |
| C84.66 | Anaplastic large cell lymphoma, ALK-positive, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C84.67 | Anaplastic large cell lymphoma, ALK-positive, spleen | Diagnosis | ICD-10-CM |
| C84.68 | Anaplastic large cell lymphoma, ALK-positive, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C84.69 | Anaplastic large cell lymphoma, ALK-positive, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C84.7 | Anaplastic large cell lymphoma, ALK-negative | Diagnosis | ICD-10-CM |
| C84.70 | Anaplastic large cell lymphoma, ALK-negative, unspecified site | Diagnosis | ICD-10-CM |
| C84.71 | Anaplastic large cell lymphoma, ALK-negative, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C84.72 | Anaplastic large cell lymphoma, ALK-negative, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C84.73 | Anaplastic large cell lymphoma, ALK-negative, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C84.74 | Anaplastic large cell lymphoma, ALK-negative, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C84.75 | Anaplastic large cell lymphoma, ALK-negative, lymph nodes of inguinal region and | Diagnosis | ICD-10-CM |
| C84.76 | Anaplastic large cell lymphoma, ALK-negative, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C84.77 | Anaplastic large cell lymphoma, ALK-negative, spleen | Diagnosis | ICD-10-CM |
| C84.78 | Anaplastic large cell lymphoma, ALK-negative, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C84.79 | Anaplastic large cell lymphoma, ALK-negative, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C84.9 | Mature T/NK-cell lymphomas, unspecified | Diagnosis | ICD-10-CM |
| C84.90 | Mature T/NK-cell lymphomas, unspecified, unspecified site | Diagnosis | ICD-10-CM |
| C84.91 | Mature T/NK-cell lymphomas, unspecified, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C84.92 | Mature T/NK-cell lymphomas, unspecified, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C84.93 | Mature T/NK-cell lymphomas, unspecified, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C84.94 | Mature T/NK-cell lymphomas, unspecified, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C84.95 | Mature T/NK-cell lymphomas, unspecified, lymph nodes of inguinal region and lower | Diagnosis | ICD-10-CM |
| C84.96 | Mature T/NK-cell lymphomas, unspecified, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C84.97 | Mature T/NK-cell lymphomas, unspecified, spleen | Diagnosis | ICD-10-CM |
| C84.98 | Mature T/NK-cell lymphomas, unspecified, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C84.99 | Mature T/NK-cell lymphomas, unspecified, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C84.A | Cutaneous T-cell lymphoma, unspecified | Diagnosis | ICD-10-CM |
| C84.A0 | Cutaneous T-cell lymphoma, unspecified, unspecified site | Diagnosis | ICD-10-CM |
| C84.A1 | Cutaneous T-cell lymphoma, unspecified lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C84.A2 | Cutaneous T-cell lymphoma, unspecified, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C84.A3 | Cutaneous T-cell lymphoma, unspecified, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C84.A4 | Cutaneous T-cell lymphoma, unspecified, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C84.A5 | Cutaneous T-cell lymphoma, unspecified, lymph nodes of inguinal region and lower | Diagnosis | ICD-10-CM |
| C84.A6 | Cutaneous T-cell lymphoma, unspecified, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C84.A7 | Cutaneous T-cell lymphoma, unspecified, spleen | Diagnosis | ICD-10-CM |
| C84.A8 | Cutaneous T-cell lymphoma, unspecified, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C84.A9 | Cutaneous T-cell lymphoma, unspecified, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C84.Z | Other mature T/NK-cell lymphomas | Diagnosis | ICD-10-CM |
| C84.Z0 | Other mature T/NK-cell lymphomas, unspecified site | Diagnosis | ICD-10-CM |
| C84.Z1 | Other mature T/NK-cell lymphomas, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C84.Z2 | Other mature T/NK-cell lymphomas, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C84.Z3 | Other mature T/NK-cell lymphomas, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C84.Z4 | Other mature T/NK-cell lymphomas, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C84.Z5 | Other mature T/NK-cell lymphomas, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C84.Z6 | Other mature T/NK-cell lymphomas, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C84.Z7 | Other mature T/NK-cell lymphomas, spleen | Diagnosis | ICD-10-CM |
| C84.Z8 | Other mature T/NK-cell lymphomas, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C84.Z9 | Other mature T/NK-cell lymphomas, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C85 | Other specified and unspecified types of non-Hodgkin lymphoma | Diagnosis | ICD-10-CM |
| C85.1 | Unspecified B-cell lymphoma | Diagnosis | ICD-10-CM |
| C85.10 | Unspecified B-cell lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C85.11 | Unspecified B-cell lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C85.12 | Unspecified B-cell lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C85.13 | Unspecified B-cell lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C85.14 | Unspecified B-cell lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C85.15 | Unspecified B-cell lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C85.16 | Unspecified B-cell lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C85.17 | Unspecified B-cell lymphoma, spleen | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| C85.18 | Unspecified B-cell lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C85.19 | Unspecified B-cell lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C85.2 | Mediastinal (thymic) large B-cell lymphoma | Diagnosis | ICD-10-CM |
| C85.20 | Mediastinal (thymic) large B-cell lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C85.21 | Mediastinal (thymic) large B-cell lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C85.22 | Mediastinal (thymic) large B-cell lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C85.23 | Mediastinal (thymic) large B-cell lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C85.24 | Mediastinal (thymic) large B-cell lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C85.25 | Mediastinal (thymic) large B-cell lymphoma, lymph nodes of inguinal region and lower | Diagnosis | ICD-10-CM |
| C85.26 | Mediastinal (thymic) large B-cell lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C85.27 | Mediastinal (thymic) large B-cell lymphoma, spleen | Diagnosis | ICD-10-CM |
| C85.28 | Mediastinal (thymic) large B-cell lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C85.29 | Mediastinal (thymic) large B-cell lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C85.8 | Other specified types of non-Hodgkin lymphoma | Diagnosis | ICD-10-CM |
| C85.80 | Other specified types of non-Hodgkin lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C85.81 | Other specified types of non-Hodgkin lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C85.82 | Other specified types of non-Hodgkin lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C85.83 | Other specified types of non-Hodgkin lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C85.84 | Other specified types of non-Hodgkin lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C85.85 | Other specified types of non-Hodgkin lymphoma, lymph nodes of inguinal region and | Diagnosis | ICD-10-CM |
| C85.86 | Other specified types of non-Hodgkin lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C85.87 | Other specified types of non-Hodgkin lymphoma, spleen | Diagnosis | ICD-10-CM |
| C85.88 | Other specified types of non-Hodgkin lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C85.89 | Other specified types of non-Hodgkin lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C85.9 | Non-Hodgkin lymphoma, unspecified | Diagnosis | ICD-10-CM |
| C85.90 | Non-Hodgkin lymphoma, unspecified, unspecified site | Diagnosis | ICD-10-CM |
| C85.91 | Non-Hodgkin lymphoma, unspecified, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C85.92 | Non-Hodgkin lymphoma, unspecified, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C85.93 | Non-Hodgkin lymphoma, unspecified, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C85.94 | Non-Hodgkin lymphoma, unspecified, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C85.95 | Non-Hodgkin lymphoma, unspecified, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C85.96 | Non-Hodgkin lymphoma, unspecified, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C85.97 | Non-Hodgkin lymphoma, unspecified, spleen | Diagnosis | ICD-10-CM |
| C85.98 | Non-Hodgkin lymphoma, unspecified, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C85.99 | Non-Hodgkin lymphoma, unspecified, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C86 | Other specified types of T/NK-cell lymphoma | Diagnosis | ICD-10-CM |
| C86.0 | Extranodal NK/T-cell lymphoma, nasal type | Diagnosis | ICD-10-CM |
| C86.1 | Hepatosplenic T-cell lymphoma | Diagnosis | ICD-10-CM |
| C86.2 | Enteropathy-type (intestinal) T-cell lymphoma | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C86.3 | Subcutaneous panniculitis-like T-cell lymphoma | Diagnosis | ICD-10-CM |
| C86.4 | Blastic NK-cell lymphoma | Diagnosis | ICD-10-CM |
| C86.5 | Angioimmunoblastic T-cell lymphoma | Diagnosis | ICD-10-CM |
| C86.6 | Primary cutaneous CD30-positive T-cell proliferations | Diagnosis | ICD-10-CM |
| C88 | Malignant immunoproliferative diseases and certain other B-cell lymphomas | Diagnosis | ICD-10-CM |
| C88.0 | Waldenstrom macroglobulinemia | Diagnosis | ICD-10-CM |
| C88.2 | Heavy chain disease | Diagnosis | ICD-10-CM |
| C88.3 | Immunoproliferative small intestinal disease | Diagnosis | ICD-10-CM |
| C88.4 | Extranodal marginal zone B-cell lymphoma of mucosa-associated lymphoid tissue | Diagnosis | ICD-10-CM |
| C88.8 | Other malignant immunoproliferative diseases | Diagnosis | ICD-10-CM |
| C88.9 | Malignant immunoproliferative disease, unspecified | Diagnosis | ICD-10-CM |
| C90 | Multiple myeloma and malignant plasma cell neoplasms | Diagnosis | ICD-10-CM |
| C90.0 | Multiple myeloma | Diagnosis | ICD-10-CM |
| C90.00 | Multiple myeloma not having achieved remission | Diagnosis | ICD-10-CM |
| C90.01 | Multiple myeloma in remission | Diagnosis | ICD-10-CM |
| C90.02 | Multiple myeloma in relapse | Diagnosis | ICD-10-CM |
| C90.1 | Plasma cell leukemia | Diagnosis | ICD-10-CM |
| C90.10 | Plasma cell leukemia not having achieved remission | Diagnosis | ICD-10-CM |
| C90.11 | Plasma cell leukemia in remission | Diagnosis | ICD-10-CM |
| C90.12 | Plasma cell leukemia in relapse | Diagnosis | ICD-10-CM |
| C90.2 | Extramedullary plasmacytoma | Diagnosis | ICD-10-CM |
| C90.20 | Extramedullary plasmacytoma not having achieved remission | Diagnosis | ICD-10-CM |
| C90.21 | Extramedullary plasmacytoma in remission | Diagnosis | ICD-10-CM |
| C90.22 | Extramedullary plasmacytoma in relapse | Diagnosis | ICD-10-CM |
| C90.3 | Solitary plasmacytoma | Diagnosis | ICD-10-CM |
| C90.30 | Solitary plasmacytoma not having achieved remission | Diagnosis | ICD-10-CM |
| C90.31 | Solitary plasmacytoma in remission | Diagnosis | ICD-10-CM |
| C90.32 | Solitary plasmacytoma in relapse | Diagnosis | ICD-10-CM |
| C91 | Lymphoid leukemia | Diagnosis | ICD-10-CM |
| C91.0 | Acute lymphoblastic leukemia [ALL] | Diagnosis | ICD-10-CM |
| C91.00 | Acute lymphoblastic leukemia not having achieved remission | Diagnosis | ICD-10-CM |
| C91.01 | Acute lymphoblastic leukemia, in remission | Diagnosis | ICD-10-CM |
| C91.02 | Acute lymphoblastic leukemia, in relapse | Diagnosis | ICD-10-CM |
| C91.1 | Chronic lymphocytic leukemia of B-cell type | Diagnosis | ICD-10-CM |
| C91.10 | Chronic lymphocytic leukemia of B-cell type not having achieved remission | Diagnosis | ICD-10-CM |
| C91.11 | Chronic lymphocytic leukemia of B-cell type in remission | Diagnosis | ICD-10-CM |
| C91.12 | Chronic lymphocytic leukemia of B-cell type in relapse | Diagnosis | ICD-10-CM |
| C91.3 | Prolymphocytic leukemia of B-cell type | Diagnosis | ICD-10-CM |
| C91.30 | Prolymphocytic leukemia of B-cell type not having achieved remission | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| C91.31 | Prolymphocytic leukemia of B-cell type, in remission | Diagnosis | ICD-10-CM |
| C91.32 | Prolymphocytic leukemia of B-cell type, in relapse | Diagnosis | ICD-10-CM |
| C91.4 | Hairy cell leukemia | Diagnosis | ICD-10-CM |
| C91.40 | Hairy cell leukemia not having achieved remission | Diagnosis | ICD-10-CM |
| C91.41 | Hairy cell leukemia, in remission | Diagnosis | ICD-10-CM |
| C91.42 | Hairy cell leukemia, in relapse | Diagnosis | ICD-10-CM |
| C91.5 | Adult T-cell lymphoma/leukemia (HTLV-1-associated) | Diagnosis | ICD-10-CM |
| C91.50 | Adult T-cell lymphoma/leukemia (HTLV-1-associated) not having achieved remission | Diagnosis | ICD-10-CM |
| C91.51 | Adult T-cell lymphoma/leukemia (HTLV-1-associated), in remission | Diagnosis | ICD-10-CM |
| C91.52 | Adult T-cell lymphoma/leukemia (HTLV-1-associated), in relapse | Diagnosis | ICD-10-CM |
| C91.6 | Prolymphocytic leukemia of T-cell type | Diagnosis | ICD-10-CM |
| C91.60 | Prolymphocytic leukemia of T-cell type not having achieved remission | Diagnosis | ICD-10-CM |
| C91.61 | Prolymphocytic leukemia of T-cell type, in remission | Diagnosis | ICD-10-CM |
| C91.62 | Prolymphocytic leukemia of T-cell type, in relapse | Diagnosis | ICD-10-CM |
| C91.9 | Lymphoid leukemia, unspecified | Diagnosis | ICD-10-CM |
| C91.90 | Lymphoid leukemia, unspecified not having achieved remission | Diagnosis | ICD-10-CM |
| C91.91 | Lymphoid leukemia, unspecified, in remission | Diagnosis | ICD-10-CM |
| C91.92 | Lymphoid leukemia, unspecified, in relapse | Diagnosis | ICD-10-CM |
| C91.A | Mature B-cell leukemia Burkitt-type | Diagnosis | ICD-10-CM |
| C91.A0 | Mature B-cell leukemia Burkitt-type not having achieved remission | Diagnosis | ICD-10-CM |
| C91.A1 | Mature B-cell leukemia Burkitt-type, in remission | Diagnosis | ICD-10-CM |
| C91.A2 | Mature B-cell leukemia Burkitt-type, in relapse | Diagnosis | ICD-10-CM |
| C91.Z | Other lymphoid leukemia | Diagnosis | ICD-10-CM |
| C91.Z0 | Other lymphoid leukemia not having achieved remission | Diagnosis | ICD-10-CM |
| C91.Z1 | Other lymphoid leukemia, in remission | Diagnosis | ICD-10-CM |
| C91.Z2 | Other lymphoid leukemia, in relapse | Diagnosis | ICD-10-CM |
| C92 | Myeloid leukemia | Diagnosis | ICD-10-CM |
| C92.0 | Acute myeloblastic leukemia | Diagnosis | ICD-10-CM |
| C92.00 | Acute myeloblastic leukemia, not having achieved remission | Diagnosis | ICD-10-CM |
| C92.01 | Acute myeloblastic leukemia, in remission | Diagnosis | ICD-10-CM |
| C92.02 | Acute myeloblastic leukemia, in relapse | Diagnosis | ICD-10-CM |
| C92.1 | Chronic myeloid leukemia, BCR/ABL-positive | Diagnosis | ICD-10-CM |
| C92.10 | Chronic myeloid leukemia, BCR/ABL-positive, not having achieved remission | Diagnosis | ICD-10-CM |
| C92.11 | Chronic myeloid leukemia, BCR/ABL-positive, in remission | Diagnosis | ICD-10-CM |
| C92.12 | Chronic myeloid leukemia, BCR/ABL-positive, in relapse | Diagnosis | ICD-10-CM |
| C92.2 | Atypical chronic myeloid leukemia, BCR/ABL-negative | Diagnosis | ICD-10-CM |
| C92.20 | Atypical chronic myeloid leukemia, BCR/ABL-negative, not having achieved remission | Diagnosis | ICD-10-CM |
| C92.21 | Atypical chronic myeloid leukemia, BCR/ABL-negative, in remission | Diagnosis | ICD-10-CM |
| C92.22 | Atypical chronic myeloid leukemia, BCR/ABL-negative, in relapse | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C92.3 | Myeloid sarcoma | Diagnosis | ICD-10-CM |
| C92.30 | Myeloid sarcoma, not having achieved remission | Diagnosis | ICD-10-CM |
| C92.31 | Myeloid sarcoma, in remission | Diagnosis | ICD-10-CM |
| C92.32 | Myeloid sarcoma, in relapse | Diagnosis | ICD-10-CM |
| C92.4 | Acute promyelocytic leukemia | Diagnosis | ICD-10-CM |
| C92.40 | Acute promyelocytic leukemia, not having achieved remission | Diagnosis | ICD-10-CM |
| C92.41 | Acute promyelocytic leukemia, in remission | Diagnosis | ICD-10-CM |
| C92.42 | Acute promyelocytic leukemia, in relapse | Diagnosis | ICD-10-CM |
| C92.5 | Acute myelomonocytic leukemia | Diagnosis | ICD-10-CM |
| C92.50 | Acute myelomonocytic leukemia, not having achieved remission | Diagnosis | ICD-10-CM |
| C92.51 | Acute myelomonocytic leukemia, in remission | Diagnosis | ICD-10-CM |
| C92.52 | Acute myelomonocytic leukemia, in relapse | Diagnosis | ICD-10-CM |
| C92.6 | Acute myeloid leukemia with 11q23-abnormality | Diagnosis | ICD-10-CM |
| C92.60 | Acute myeloid leukemia with 11q23-abnormality not having achieved remission | Diagnosis | ICD-10-CM |
| C92.61 | Acute myeloid leukemia with 11q23-abnormality in remission | Diagnosis | ICD-10-CM |
| C92.62 | Acute myeloid leukemia with 11q23-abnormality in relapse | Diagnosis | ICD-10-CM |
| C92.9 | Myeloid leukemia, unspecified | Diagnosis | ICD-10-CM |
| C92.90 | Myeloid leukemia, unspecified, not having achieved remission | Diagnosis | ICD-10-CM |
| C92.91 | Myeloid leukemia, unspecified in remission | Diagnosis | ICD-10-CM |
| C92.92 | Myeloid leukemia, unspecified in relapse | Diagnosis | ICD-10-CM |
| C92.A | Acute myeloid leukemia with multilineage dysplasia | Diagnosis | ICD-10-CM |
| C92.A0 | Acute myeloid leukemia with multilineage dysplasia, not having achieved remission | Diagnosis | ICD-10-CM |
| C92.A1 | Acute myeloid leukemia with multilineage dysplasia, in remission | Diagnosis | ICD-10-CM |
| C92.A2 | Acute myeloid leukemia with multilineage dysplasia, in relapse | Diagnosis | ICD-10-CM |
| C92.Z | Other myeloid leukemia | Diagnosis | ICD-10-CM |
| C92.Z0 | Other myeloid leukemia not having achieved remission | Diagnosis | ICD-10-CM |
| C92.Z1 | Other myeloid leukemia, in remission | Diagnosis | ICD-10-CM |
| C92.Z2 | Other myeloid leukemia, in relapse | Diagnosis | ICD-10-CM |
| C93 | Monocytic leukemia | Diagnosis | ICD-10-CM |
| C93.0 | Acute monoblastic/monocytic leukemia | Diagnosis | ICD-10-CM |
| C93.00 | Acute monoblastic/monocytic leukemia, not having achieved remission | Diagnosis | ICD-10-CM |
| C93.01 | Acute monoblastic/monocytic leukemia, in remission | Diagnosis | ICD-10-CM |
| C93.02 | Acute monoblastic/monocytic leukemia, in relapse | Diagnosis | ICD-10-CM |
| C93.1 | Chronic myelomonocytic leukemia | Diagnosis | ICD-10-CM |
| C93.10 | Chronic myelomonocytic leukemia not having achieved remission | Diagnosis | ICD-10-CM |
| C93.11 | Chronic myelomonocytic leukemia, in remission | Diagnosis | ICD-10-CM |
| C93.12 | Chronic myelomonocytic leukemia, in relapse | Diagnosis | ICD-10-CM |
| C93.3 | Juvenile myelomonocytic leukemia | Diagnosis | ICD-10-CM |
| C93.30 | Juvenile myelomonocytic leukemia, not having achieved remission | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C93.31 | Juvenile myelomonocytic leukemia, in remission | Diagnosis | ICD-10-CM |
| C93.32 | Juvenile myelomonocytic leukemia, in relapse | Diagnosis | ICD-10-CM |
| C93.9 | Monocytic leukemia, unspecified | Diagnosis | ICD-10-CM |
| C93.90 | Monocytic leukemia, unspecified, not having achieved remission | Diagnosis | ICD-10-CM |
| C93.91 | Monocytic leukemia, unspecified in remission | Diagnosis | ICD-10-CM |
| C93.92 | Monocytic leukemia, unspecified in relapse | Diagnosis | ICD-10-CM |
| C93.Z | Other monocytic leukemia | Diagnosis | ICD-10-CM |
| C93.Z0 | Other monocytic leukemia, not having achieved remission | Diagnosis | ICD-10-CM |
| C93.Z1 | Other monocytic leukemia, in remission | Diagnosis | ICD-10-CM |
| C93.Z2 | Other monocytic leukemia, in relapse | Diagnosis | ICD-10-CM |
| C94 | Other leukemias of specified cell type | Diagnosis | ICD-10-CM |
| C94.0 | Acute erythroid leukemia | Diagnosis | ICD-10-CM |
| C94.00 | Acute erythroid leukemia, not having achieved remission | Diagnosis | ICD-10-CM |
| C94.01 | Acute erythroid leukemia, in remission | Diagnosis | ICD-10-CM |
| C94.02 | Acute erythroid leukemia, in relapse | Diagnosis | ICD-10-CM |
| C94.2 | Acute megakaryoblastic leukemia | Diagnosis | ICD-10-CM |
| C94.20 | Acute megakaryoblastic leukemia not having achieved remission | Diagnosis | ICD-10-CM |
| C94.21 | Acute megakaryoblastic leukemia, in remission | Diagnosis | ICD-10-CM |
| C94.22 | Acute megakaryoblastic leukemia, in relapse | Diagnosis | ICD-10-CM |
| C94.3 | Mast cell leukemia | Diagnosis | ICD-10-CM |
| C94.30 | Mast cell leukemia not having achieved remission | Diagnosis | ICD-10-CM |
| C94.31 | Mast cell leukemia, in remission | Diagnosis | ICD-10-CM |
| C94.32 | Mast cell leukemia, in relapse | Diagnosis | ICD-10-CM |
| C94.4 | Acute panmyelosis with myelofibrosis | Diagnosis | ICD-10-CM |
| C94.40 | Acute panmyelosis with myelofibrosis not having achieved remission | Diagnosis | ICD-10-CM |
| C94.41 | Acute panmyelosis with myelofibrosis, in remission | Diagnosis | ICD-10-CM |
| C94.42 | Acute panmyelosis with myelofibrosis, in relapse | Diagnosis | ICD-10-CM |
| C94.6 | Myelodysplastic disease, not classified | Diagnosis | ICD-10-CM |
| C94.8 | Other specified leukemias | Diagnosis | ICD-10-CM |
| C94.80 | Other specified leukemias not having achieved remission | Diagnosis | ICD-10-CM |
| C94.81 | Other specified leukemias, in remission | Diagnosis | ICD-10-CM |
| C94.82 | Other specified leukemias, in relapse | Diagnosis | ICD-10-CM |
| C95 | Leukemia of unspecified cell type | Diagnosis | ICD-10-CM |
| C95.0 | Acute leukemia of unspecified cell type | Diagnosis | ICD-10-CM |
| C95.00 | Acute leukemia of unspecified cell type not having achieved remission | Diagnosis | ICD-10-CM |
| C95.01 | Acute leukemia of unspecified cell type, in remission | Diagnosis | ICD-10-CM |
| C95.02 | Acute leukemia of unspecified cell type, in relapse | Diagnosis | ICD-10-CM |
| C95.1 | Chronic leukemia of unspecified cell type | Diagnosis | ICD-10-CM |
| C95.10 | Chronic leukemia of unspecified cell type not having achieved remission | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C95.11 | Chronic leukemia of unspecified cell type, in remission | Diagnosis | ICD-10-CM |
| C95.12 | Chronic leukemia of unspecified cell type, in relapse | Diagnosis | ICD-10-CM |
| C95.9 | Leukemia, unspecified | Diagnosis | ICD-10-CM |
| C95.90 | Leukemia, unspecified not having achieved remission | Diagnosis | ICD-10-CM |
| C95.91 | Leukemia, unspecified, in remission | Diagnosis | ICD-10-CM |
| C95.92 | Leukemia, unspecified, in relapse | Diagnosis | ICD-10-CM |
| C96 | Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related | Diagnosis | ICD-10-CM |
| C96.0 | Multifocal and multisystemic (disseminated) Langerhans-cell histiocytosis | Diagnosis | ICD-10-CM |
| C96.2 | Malignant mast cell neoplasm | Diagnosis | ICD-10-CM |
| C96.20 | Malignant mast cell neoplasm, unspecified | Diagnosis | ICD-10-CM |
| C96.21 | Aggressive systemic mastocytosis | Diagnosis | ICD-10-CM |
| C96.22 | Mast cell sarcoma | Diagnosis | ICD-10-CM |
| C96.29 | Other malignant mast cell neoplasm | Diagnosis | ICD-10-CM |
| C96.4 | Sarcoma of dendritic cells (accessory cells) | Diagnosis | ICD-10-CM |
| C96.5 | Multifocal and unisystemic Langerhans-cell histiocytosis | Diagnosis | ICD-10-CM |
| C96.6 | Unifocal Langerhans-cell histiocytosis | Diagnosis | ICD-10-CM |
| C96.9 | Malignant neoplasm of lymphoid, hematopoietic and related tissue, unspecified | Diagnosis | ICD-10-CM |
| C96.A | Histiocytic sarcoma | Diagnosis | ICD-10-CM |
| C96.Z | Other specified malignant neoplasms of lymphoid, hematopoietic and related tissue | Diagnosis | ICD-10-CM |
| D03.0 | Melanoma in situ of lip | Diagnosis | ICD-10-CM |
| D03.10 | Melanoma in situ of unspecified eyelid, including canthus | Diagnosis | ICD-10-CM |
| D03.11 | Melanoma in situ of right eyelid, including canthus | Diagnosis | ICD-10-CM |
| D03.12 | Melanoma in situ of left eyelid, including canthus | Diagnosis | ICD-10-CM |
| D03.20 | Melanoma in situ of unspecified ear and external auricular canal | Diagnosis | ICD-10-CM |
| D03.21 | Melanoma in situ of right ear and external auricular canal | Diagnosis | ICD-10-CM |
| D03.22 | Melanoma in situ of left ear and external auricular canal | Diagnosis | ICD-10-CM |
| D03.30 | Melanoma in situ of unspecified part of face | Diagnosis | ICD-10-CM |
| D03.39 | Melanoma in situ of other parts of face | Diagnosis | ICD-10-CM |
| D03.4 | Melanoma in situ of scalp and neck | Diagnosis | ICD-10-CM |
| D03.51 | Melanoma in situ of anal skin | Diagnosis | ICD-10-CM |
| D03.52 | Melanoma in situ of breast (skin) (soft tissue) | Diagnosis | ICD-10-CM |
| D03.59 | Melanoma in situ of other part of trunk | Diagnosis | ICD-10-CM |
| D03.60 | Melanoma in situ of unspecified upper limb, including shoulder | Diagnosis | ICD-10-CM |
| D03.61 | Melanoma in situ of right upper limb, including shoulder | Diagnosis | ICD-10-CM |
| D03.62 | Melanoma in situ of left upper limb, including shoulder | Diagnosis | ICD-10-CM |
| D03.70 | Melanoma in situ of unspecified lower limb, including hip | Diagnosis | ICD-10-CM |
| D03.71 | Melanoma in situ of right lower limb, including hip | Diagnosis | ICD-10-CM |
| D03.72 | Melanoma in situ of left lower limb, including hip | Diagnosis | ICD-10-CM |
| D03.8 | Melanoma in situ of other sites | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--|---|---------------|------------|
| D03.9 | Melanoma in situ, unspecified | Diagnosis | ICD-10-CM |
| D45 | Polycythemia vera | Diagnosis | ICD-10-CM |
| D47.1 | Chronic myeloproliferative disease | Diagnosis | ICD-10-CM |
| D47.3 | Essential (hemorrhagic) thrombocythemia | Diagnosis | ICD-10-CM |
| O9A.1 | Malignant neoplasm complicating pregnancy, childbirth and the puerperium | Diagnosis | ICD-10-CM |
| O9A.11 | Malignant neoplasm complicating pregnancy | Diagnosis | ICD-10-CM |
| O9A.111 | Malignant neoplasm complicating pregnancy, first trimester | Diagnosis | ICD-10-CM |
| O9A.112 | Malignant neoplasm complicating pregnancy, second trimester | Diagnosis | ICD-10-CM |
| O9A.113 | Malignant neoplasm complicating pregnancy, third trimester | Diagnosis | ICD-10-CM |
| O9A.119 | Malignant neoplasm complicating pregnancy, unspecified trimester | Diagnosis | ICD-10-CM |
| O9A.12 | Malignant neoplasm complicating childbirth | Diagnosis | ICD-10-CM |
| O9A.13 | Malignant neoplasm complicating the puerperium | Diagnosis | ICD-10-CM |
| R97.21 | Rising PSA following treatment for malignant neoplasm of prostate | Diagnosis | ICD-10-CM |
| Cardiovascular (including Congenital Heart Disease) | | | |
| 0210083 | Bypass Coronary Artery, One Artery from Coronary Artery with Zooplastic Tissue, Open Approach | Procedure | ICD-10-PCS |
| 0210088 | Bypass Coronary Artery, One Artery from Right Internal Mammary with Zooplastic Tissue, Open Approach | Procedure | ICD-10-PCS |
| 0210089 | Bypass Coronary Artery, One Artery from Left Internal Mammary with Zooplastic Tissue, Open Approach | Procedure | ICD-10-PCS |
| 021008C | Bypass Coronary Artery, One Artery from Thoracic Artery with Zooplastic Tissue, Open Approach | Procedure | ICD-10-PCS |
| 021008F | Bypass Coronary Artery, One Artery from Abdominal Artery with Zooplastic Tissue, Open Approach | Procedure | ICD-10-PCS |
| 021008W | Bypass Coronary Artery, One Artery from Aorta with Zooplastic Tissue, Open Approach | Procedure | ICD-10-PCS |
| 0210093 | Bypass Coronary Artery, One Artery from Coronary Artery with Autologous Venous Tissue, Open Approach | Procedure | ICD-10-PCS |
| 0210098 | Bypass Coronary Artery, One Artery from Right Internal Mammary with Autologous Venous Tissue, Open Approach | Procedure | ICD-10-PCS |
| 0210099 | Bypass Coronary Artery, One Artery from Left Internal Mammary with Autologous Venous Tissue, Open Approach | Procedure | ICD-10-PCS |
| 021009C | Bypass Coronary Artery, One Artery from Thoracic Artery with Autologous Venous Tissue, Open Approach | Procedure | ICD-10-PCS |
| 021009F | Bypass Coronary Artery, One Artery from Abdominal Artery with Autologous Venous Tissue, Open Approach | Procedure | ICD-10-PCS |
| 021009W | Bypass Coronary Artery, One Artery from Aorta with Autologous Venous Tissue, Open Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| 02100A3 | Bypass Coronary Artery, One Artery from Coronary Artery with Autologous Arterial Tissue, Open Approach | Procedure | ICD-10-PCS |
| 02100A8 | Bypass Coronary Artery, One Artery from Right Internal Mammary with Autologous Arterial Tissue, Open Approach | Procedure | ICD-10-PCS |
| 02100A9 | Bypass Coronary Artery, One Artery from Left Internal Mammary with Autologous Arterial Tissue, Open Approach | Procedure | ICD-10-PCS |
| 02100AC | Bypass Coronary Artery, One Artery from Thoracic Artery with Autologous Arterial Tissue, Open Approach | Procedure | ICD-10-PCS |
| 02100AF | Bypass Coronary Artery, One Artery from Abdominal Artery with Autologous Arterial Tissue, Open Approach | Procedure | ICD-10-PCS |
| 02100AW | Bypass Coronary Artery, One Artery from Aorta with Autologous Arterial Tissue, Open Approach | Procedure | ICD-10-PCS |
| 02100J3 | Bypass Coronary Artery, One Artery from Coronary Artery with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02100J8 | Bypass Coronary Artery, One Artery from Right Internal Mammary with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02100J9 | Bypass Coronary Artery, One Artery from Left Internal Mammary with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02100JC | Bypass Coronary Artery, One Artery from Thoracic Artery with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02100JF | Bypass Coronary Artery, One Artery from Abdominal Artery with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02100JW | Bypass Coronary Artery, One Artery from Aorta with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02100K3 | Bypass Coronary Artery, One Artery from Coronary Artery with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02100K8 | Bypass Coronary Artery, One Artery from Right Internal Mammary with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02100K9 | Bypass Coronary Artery, One Artery from Left Internal Mammary with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02100KC | Bypass Coronary Artery, One Artery from Thoracic Artery with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02100KF | Bypass Coronary Artery, One Artery from Abdominal Artery with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02100KW | Bypass Coronary Artery, One Artery from Aorta with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02100Z3 | Bypass Coronary Artery, One Artery from Coronary Artery, Open Approach | Procedure | ICD-10-PCS |
| 02100Z8 | Bypass Coronary Artery, One Artery from Right Internal Mammary, Open Approach | Procedure | ICD-10-PCS |
| 02100Z9 | Bypass Coronary Artery, One Artery from Left Internal Mammary, Open Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| 02100ZC | Bypass Coronary Artery, One Artery from Thoracic Artery, Open Approach | Procedure | ICD-10-PCS |
| 02100ZF | Bypass Coronary Artery, One Artery from Abdominal Artery, Open Approach | Procedure | ICD-10-PCS |
| 0210344 | Bypass Coronary Artery, One Artery from Coronary Vein with Drug-eluting Intraluminal Device, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02103D4 | Bypass Coronary Artery, One Artery from Coronary Vein with Intraluminal Device, Percutaneous Approach | Procedure | ICD-10-PCS |
| 0210444 | Bypass Coronary Artery, One Artery from Coronary Vein with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0210483 | Bypass Coronary Artery, One Artery from Coronary Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0210488 | Bypass Coronary Artery, One Artery from Right Internal Mammary with Zooplastic Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0210489 | Bypass Coronary Artery, One Artery from Left Internal Mammary with Zooplastic Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 021048C | Bypass Coronary Artery, One Artery from Thoracic Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 021048F | Bypass Coronary Artery, One Artery from Abdominal Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 021048W | Bypass Coronary Artery, One Artery from Aorta with Zooplastic Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0210493 | Bypass Coronary Artery, One Artery from Coronary Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0210498 | Bypass Coronary Artery, One Artery from Right Internal Mammary with Autologous Venous Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0210499 | Bypass Coronary Artery, One Artery from Left Internal Mammary with Autologous Venous Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 021049C | Bypass Coronary Artery, One Artery from Thoracic Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 021049F | Bypass Coronary Artery, One Artery from Abdominal Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 021049W | Bypass Coronary Artery, One Artery from Aorta with Autologous Venous Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104A3 | Bypass Coronary Artery, One Artery from Coronary Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104A8 | Bypass Coronary Artery, One Artery from Right Internal Mammary with Autologous Arterial Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104A9 | Bypass Coronary Artery, One Artery from Left Internal Mammary with Autologous Arterial Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| 02104AC | Bypass Coronary Artery, One Artery from Thoracic Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104AF | Bypass Coronary Artery, One Artery from Abdominal Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104AW | Bypass Coronary Artery, One Artery from Aorta with Autologous Arterial Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104D4 | Bypass Coronary Artery, One Artery from Coronary Vein with Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104J3 | Bypass Coronary Artery, One Artery from Coronary Artery with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104J8 | Bypass Coronary Artery, One Artery from Right Internal Mammary with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104J9 | Bypass Coronary Artery, One Artery from Left Internal Mammary with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104JC | Bypass Coronary Artery, One Artery from Thoracic Artery with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104JF | Bypass Coronary Artery, One Artery from Abdominal Artery with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104JW | Bypass Coronary Artery, One Artery from Aorta with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104K3 | Bypass Coronary Artery, One Artery from Coronary Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104K8 | Bypass Coronary Artery, One Artery from Right Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104K9 | Bypass Coronary Artery, One Artery from Left Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104KC | Bypass Coronary Artery, One Artery from Thoracic Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104KF | Bypass Coronary Artery, One Artery from Abdominal Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104KW | Bypass Coronary Artery, One Artery from Aorta with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104Z3 | Bypass Coronary Artery, One Artery from Coronary Artery, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104Z8 | Bypass Coronary Artery, One Artery from Right Internal Mammary, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02104Z9 | Bypass Coronary Artery, One Artery from Left Internal Mammary, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| 0211488 | Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Zooplastic Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0211489 | Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Zooplastic Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 021148C | Bypass Coronary Artery, Two Arteries from Thoracic Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 021148F | Bypass Coronary Artery, Two Arteries from Abdominal Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 021148W | Bypass Coronary Artery, Two Arteries from Aorta with Zooplastic Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0211493 | Bypass Coronary Artery, Two Arteries from Coronary Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0211498 | Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Autologous Venous Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0211499 | Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Autologous Venous Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 021149C | Bypass Coronary Artery, Two Arteries from Thoracic Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 021149F | Bypass Coronary Artery, Two Arteries from Abdominal Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 021149W | Bypass Coronary Artery, Two Arteries from Aorta with Autologous Venous Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114A3 | Bypass Coronary Artery, Two Arteries from Coronary Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114A8 | Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Autologous Arterial Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114A9 | Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Autologous Arterial Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114AC | Bypass Coronary Artery, Two Arteries from Thoracic Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114AF | Bypass Coronary Artery, Two Arteries from Abdominal Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114AW | Bypass Coronary Artery, Two Arteries from Aorta with Autologous Arterial Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114D4 | Bypass Coronary Artery, Two Arteries from Coronary Vein with Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114J3 | Bypass Coronary Artery, Two Arteries from Coronary Artery with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| 02114J8 | Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114J9 | Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114JC | Bypass Coronary Artery, Two Arteries from Thoracic Artery with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114JF | Bypass Coronary Artery, Two Arteries from Abdominal Artery with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114JW | Bypass Coronary Artery, Two Arteries from Aorta with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114K3 | Bypass Coronary Artery, Two Arteries from Coronary Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114K8 | Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114K9 | Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114KC | Bypass Coronary Artery, Two Arteries from Thoracic Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114KF | Bypass Coronary Artery, Two Arteries from Abdominal Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114KW | Bypass Coronary Artery, Two Arteries from Aorta with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114Z3 | Bypass Coronary Artery, Two Arteries from Coronary Artery, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114Z8 | Bypass Coronary Artery, Two Arteries from Right Internal Mammary, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114Z9 | Bypass Coronary Artery, Two Arteries from Left Internal Mammary, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114ZC | Bypass Coronary Artery, Two Arteries from Thoracic Artery, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02114ZF | Bypass Coronary Artery, Two Arteries from Abdominal Artery, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0212083 | Bypass Coronary Artery, Three Arteries from Coronary Artery with Zooplastic Tissue, Open Approach | Procedure | ICD-10-PCS |
| 0212088 | Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Zooplastic Tissue, Open Approach | Procedure | ICD-10-PCS |
| 0212089 | Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Zooplastic Tissue, Open Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| 021208C | Bypass Coronary Artery, Three Arteries from Thoracic Artery with Zooplastic Tissue, Open Approach | Procedure | ICD-10-PCS |
| 021208F | Bypass Coronary Artery, Three Arteries from Abdominal Artery with Zooplastic Tissue, Open Approach | Procedure | ICD-10-PCS |
| 021208W | Bypass Coronary Artery, Three Arteries from Aorta with Zooplastic Tissue, Open Approach | Procedure | ICD-10-PCS |
| 0212093 | Bypass Coronary Artery, Three Arteries from Coronary Artery with Autologous Venous Tissue, Open Approach | Procedure | ICD-10-PCS |
| 0212098 | Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Autologous Venous Tissue, Open Approach | Procedure | ICD-10-PCS |
| 0212099 | Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Autologous Venous Tissue, Open Approach | Procedure | ICD-10-PCS |
| 021209C | Bypass Coronary Artery, Three Arteries from Thoracic Artery with Autologous Venous Tissue, Open Approach | Procedure | ICD-10-PCS |
| 021209F | Bypass Coronary Artery, Three Arteries from Abdominal Artery with Autologous Venous Tissue, Open Approach | Procedure | ICD-10-PCS |
| 021209W | Bypass Coronary Artery, Three Arteries from Aorta with Autologous Venous Tissue, Open Approach | Procedure | ICD-10-PCS |
| 02120A3 | Bypass Coronary Artery, Three Arteries from Coronary Artery with Autologous Arterial Tissue, Open Approach | Procedure | ICD-10-PCS |
| 02120A8 | Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Autologous Arterial Tissue, Open Approach | Procedure | ICD-10-PCS |
| 02120A9 | Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Autologous Arterial Tissue, Open Approach | Procedure | ICD-10-PCS |
| 02120AC | Bypass Coronary Artery, Three Arteries from Thoracic Artery with Autologous Arterial Tissue, Open Approach | Procedure | ICD-10-PCS |
| 02120AF | Bypass Coronary Artery, Three Arteries from Abdominal Artery with Autologous Arterial Tissue, Open Approach | Procedure | ICD-10-PCS |
| 02120AW | Bypass Coronary Artery, Three Arteries from Aorta with Autologous Arterial Tissue, Open Approach | Procedure | ICD-10-PCS |
| 02120J3 | Bypass Coronary Artery, Three Arteries from Coronary Artery with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02120J8 | Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02120J9 | Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02120JC | Bypass Coronary Artery, Three Arteries from Thoracic Artery with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| 02124K3 | Bypass Coronary Artery, Three Arteries from Coronary Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02124K8 | Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02124K9 | Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02124KC | Bypass Coronary Artery, Three Arteries from Thoracic Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02124KF | Bypass Coronary Artery, Three Arteries from Abdominal Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02124KW | Bypass Coronary Artery, Three Arteries from Aorta with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02124Z3 | Bypass Coronary Artery, Three Arteries from Coronary Artery, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02124Z8 | Bypass Coronary Artery, Three Arteries from Right Internal Mammary, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02124Z9 | Bypass Coronary Artery, Three Arteries from Left Internal Mammary, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02124ZC | Bypass Coronary Artery, Three Arteries from Thoracic Artery, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02124ZF | Bypass Coronary Artery, Three Arteries from Abdominal Artery, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0213083 | Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Zooplastic Tissue, Open Approach | Procedure | ICD-10-PCS |
| 0213088 | Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Zooplastic Tissue, Open Approach | Procedure | ICD-10-PCS |
| 0213089 | Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Zooplastic Tissue, Open Approach | Procedure | ICD-10-PCS |
| 021308C | Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Zooplastic Tissue, Open Approach | Procedure | ICD-10-PCS |
| 021308F | Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Zooplastic Tissue, Open Approach | Procedure | ICD-10-PCS |
| 021308W | Bypass Coronary Artery, Four or More Arteries from Aorta with Zooplastic Tissue, Open Approach | Procedure | ICD-10-PCS |
| 0213093 | Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Autologous Venous Tissue, Open Approach | Procedure | ICD-10-PCS |
| 0213098 | Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Autologous Venous Tissue, Open Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| 0213099 | Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Autologous Venous Tissue, Open Approach | Procedure | ICD-10-PCS |
| 021309C | Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Autologous Venous Tissue, Open Approach | Procedure | ICD-10-PCS |
| 021309F | Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Autologous Venous Tissue, Open Approach | Procedure | ICD-10-PCS |
| 021309W | Bypass Coronary Artery, Four or More Arteries from Aorta with Autologous Venous Tissue, Open Approach | Procedure | ICD-10-PCS |
| 02130A3 | Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Autologous Arterial Tissue, Open Approach | Procedure | ICD-10-PCS |
| 02130A8 | Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Autologous Arterial Tissue, Open Approach | Procedure | ICD-10-PCS |
| 02130A9 | Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Autologous Arterial Tissue, Open Approach | Procedure | ICD-10-PCS |
| 02130AC | Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Autologous Arterial Tissue, Open Approach | Procedure | ICD-10-PCS |
| 02130AF | Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Autologous Arterial Tissue, Open Approach | Procedure | ICD-10-PCS |
| 02130AW | Bypass Coronary Artery, Four or More Arteries from Aorta with Autologous Arterial Tissue, Open Approach | Procedure | ICD-10-PCS |
| 02130J3 | Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02130J8 | Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02130J9 | Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02130JC | Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02130JF | Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02130JW | Bypass Coronary Artery, Four or More Arteries from Aorta with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02130K3 | Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02130K8 | Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02130K9 | Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| 02130KC | Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02130KF | Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02130KW | Bypass Coronary Artery, Four or More Arteries from Aorta with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02130Z3 | Bypass Coronary Artery, Four or More Arteries from Coronary Artery, Open Approach | Procedure | ICD-10-PCS |
| 02130Z8 | Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary, Open Approach | Procedure | ICD-10-PCS |
| 02130Z9 | Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary, Open Approach | Procedure | ICD-10-PCS |
| 02130ZC | Bypass Coronary Artery, Four or More Arteries from Thoracic Artery, Open Approach | Procedure | ICD-10-PCS |
| 02130ZF | Bypass Coronary Artery, Four or More Arteries from Abdominal Artery, Open Approach | Procedure | ICD-10-PCS |
| 0213344 | Bypass Coronary Artery, Four or More Arteries from Coronary Vein with Drug-eluting Intraluminal Device, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02133D4 | Bypass Coronary Artery, Four or More Arteries from Coronary Vein with Intraluminal Device, Percutaneous Approach | Procedure | ICD-10-PCS |
| 0213444 | Bypass Coronary Artery, Four or More Arteries from Coronary Vein with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0213483 | Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0213488 | Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Zooplastic Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0213489 | Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Zooplastic Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 021348C | Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 021348F | Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 021348W | Bypass Coronary Artery, Four or More Arteries from Aorta with Zooplastic Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0213493 | Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0213498 | Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Autologous Venous Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| 0213499 | Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Autologous Venous Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 021349C | Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 021349F | Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 021349W | Bypass Coronary Artery, Four or More Arteries from Aorta with Autologous Venous Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134A3 | Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134A8 | Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Autologous Arterial Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134A9 | Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Autologous Arterial Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134AC | Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134AF | Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134AW | Bypass Coronary Artery, Four or More Arteries from Aorta with Autologous Arterial Tissue, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134D4 | Bypass Coronary Artery, Four or More Arteries from Coronary Vein with Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134J3 | Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134J8 | Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134J9 | Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134JC | Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134JF | Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134JW | Bypass Coronary Artery, Four or More Arteries from Aorta with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134K3 | Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134K8 | Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| 02134K9 | Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134KC | Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134KF | Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134KW | Bypass Coronary Artery, Four or More Arteries from Aorta with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134Z3 | Bypass Coronary Artery, Four or More Arteries from Coronary Artery, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134Z8 | Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134Z9 | Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134ZC | Bypass Coronary Artery, Four or More Arteries from Thoracic Artery, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02134ZF | Bypass Coronary Artery, Four or More Arteries from Abdominal Artery, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0270046 | Dilation of Coronary Artery, One Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach | Procedure | ICD-10-PCS |
| 027004Z | Dilation of Coronary Artery, One Artery with Drug-eluting Intraluminal Device, Open Approach | Procedure | ICD-10-PCS |
| 0270056 | Dilation of Coronary Artery, One Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach | Procedure | ICD-10-PCS |
| 027005Z | Dilation of Coronary Artery, One Artery with Two Drug-eluting Intraluminal Devices, Open Approach | Procedure | ICD-10-PCS |
| 0270066 | Dilation of Coronary Artery, One Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach | Procedure | ICD-10-PCS |
| 027006Z | Dilation of Coronary Artery, One Artery with Three Drug-eluting Intraluminal Devices, Open Approach | Procedure | ICD-10-PCS |
| 0270076 | Dilation of Coronary Artery, One Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach | Procedure | ICD-10-PCS |
| 027007Z | Dilation of Coronary Artery, One Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach | Procedure | ICD-10-PCS |
| 02700D6 | Dilation of Coronary Artery, One Artery, Bifurcation, with Intraluminal Device, Open Approach | Procedure | ICD-10-PCS |
| 02700DZ | Dilation of Coronary Artery, One Artery with Intraluminal Device, Open Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| 02703DZ | Dilation of Coronary Artery, One Artery with Intraluminal Device, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02703E6 | Dilation of Coronary Artery, One Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02703EZ | Dilation of Coronary Artery, One Artery with Two Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02703F6 | Dilation of Coronary Artery, One Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02703FZ | Dilation of Coronary Artery, One Artery with Three Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02703G6 | Dilation of Coronary Artery, One Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02703GZ | Dilation of Coronary Artery, One Artery with Four or More Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02703T6 | Dilation of Coronary Artery, One Artery, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02703TZ | Dilation of Coronary Artery, One Artery with Radioactive Intraluminal Device, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02703Z6 | Dilation of Coronary Artery, One Artery, Bifurcation, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02703ZZ | Dilation of Coronary Artery, One Artery, Percutaneous Approach | Procedure | ICD-10-PCS |
| 0270446 | Dilation of Coronary Artery, One Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 027044Z | Dilation of Coronary Artery, One Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0270456 | Dilation of Coronary Artery, One Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 027045Z | Dilation of Coronary Artery, One Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0270466 | Dilation of Coronary Artery, One Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 027046Z | Dilation of Coronary Artery, One Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0270476 | Dilation of Coronary Artery, One Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 027047Z | Dilation of Coronary Artery, One Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------------|---|----------------------|------------------|
| 027107Z | Dilation of Coronary Artery, Two Arteries with Four or More Drug-eluting Intraluminal Devices, Open Approach | Procedure | ICD-10-PCS |
| 02710D6 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Intraluminal Device, Open Approach | Procedure | ICD-10-PCS |
| 02710DZ | Dilation of Coronary Artery, Two Arteries with Intraluminal Device, Open Approach | Procedure | ICD-10-PCS |
| 02710E6 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Two Intraluminal Devices, Open Approach | Procedure | ICD-10-PCS |
| 02710EZ | Dilation of Coronary Artery, Two Arteries with Two Intraluminal Devices, Open Approach | Procedure | ICD-10-PCS |
| 02710F6 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Three Intraluminal Devices, Open Approach | Procedure | ICD-10-PCS |
| 02710FZ | Dilation of Coronary Artery, Two Arteries with Three Intraluminal Devices, Open Approach | Procedure | ICD-10-PCS |
| 02710G6 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Four or More Intraluminal Devices, Open Approach | Procedure | ICD-10-PCS |
| 02710GZ | Dilation of Coronary Artery, Two Arteries with Four or More Intraluminal Devices, Open Approach | Procedure | ICD-10-PCS |
| 02710T6 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Radioactive Intraluminal Device, Open Approach | Procedure | ICD-10-PCS |
| 02710TZ | Dilation of Coronary Artery, Two Arteries with Radioactive Intraluminal Device, Open Approach | Procedure | ICD-10-PCS |
| 02710Z6 | Dilation of Coronary Artery, Two Arteries, Bifurcation, Open Approach | Procedure | ICD-10-PCS |
| 02710ZZ | Dilation of Coronary Artery, Two Arteries, Open Approach | Procedure | ICD-10-PCS |
| 0271346 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach | Procedure | ICD-10-PCS |
| 027134Z | Dilation of Coronary Artery, Two Arteries with Drug-eluting Intraluminal Device, Percutaneous Approach | Procedure | ICD-10-PCS |
| 0271356 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 027135Z | Dilation of Coronary Artery, Two Arteries with Two Drug-eluting Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 0271366 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 027136Z | Dilation of Coronary Artery, Two Arteries with Three Drug-eluting Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| 0271376 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 027137Z | Dilation of Coronary Artery, Two Arteries with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02713D6 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Intraluminal Device, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02713DZ | Dilation of Coronary Artery, Two Arteries with Intraluminal Device, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02713E6 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02713EZ | Dilation of Coronary Artery, Two Arteries with Two Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02713F6 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02713FZ | Dilation of Coronary Artery, Two Arteries with Three Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02713G6 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02713GZ | Dilation of Coronary Artery, Two Arteries with Four or More Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02713T6 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02713TZ | Dilation of Coronary Artery, Two Arteries with Radioactive Intraluminal Device, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02713Z6 | Dilation of Coronary Artery, Two Arteries, Bifurcation, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02713ZZ | Dilation of Coronary Artery, Two Arteries, Percutaneous Approach | Procedure | ICD-10-PCS |
| 0271446 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 027144Z | Dilation of Coronary Artery, Two Arteries with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0271456 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 027145Z | Dilation of Coronary Artery, Two Arteries with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0271466 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| 027146Z | Dilation of Coronary Artery, Two Arteries with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0271476 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 027147Z | Dilation of Coronary Artery, Two Arteries with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02714D6 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02714DZ | Dilation of Coronary Artery, Two Arteries with Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02714E6 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02714EZ | Dilation of Coronary Artery, Two Arteries with Two Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02714F6 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02714FZ | Dilation of Coronary Artery, Two Arteries with Three Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02714G6 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02714GZ | Dilation of Coronary Artery, Two Arteries with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02714T6 | Dilation of Coronary Artery, Two Arteries, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02714TZ | Dilation of Coronary Artery, Two Arteries with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02714Z6 | Dilation of Coronary Artery, Two Arteries, Bifurcation, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02714ZZ | Dilation of Coronary Artery, Two Arteries, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0272046 | Dilation of Coronary Artery, Three Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach | Procedure | ICD-10-PCS |
| 027204Z | Dilation of Coronary Artery, Three Arteries with Drug-eluting Intraluminal Device, Open Approach | Procedure | ICD-10-PCS |
| 0272056 | Dilation of Coronary Artery, Three Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach | Procedure | ICD-10-PCS |
| 027205Z | Dilation of Coronary Artery, Three Arteries with Two Drug-eluting Intraluminal Devices, Open Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| 027235Z | Dilation of Coronary Artery, Three Arteries with Two Drug-eluting Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 0272366 | Dilation of Coronary Artery, Three Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 027236Z | Dilation of Coronary Artery, Three Arteries with Three Drug-eluting Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 0272376 | Dilation of Coronary Artery, Three Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 027237Z | Dilation of Coronary Artery, Three Arteries with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02723D6 | Dilation of Coronary Artery, Three Arteries, Bifurcation, with Intraluminal Device, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02723DZ | Dilation of Coronary Artery, Three Arteries with Intraluminal Device, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02723E6 | Dilation of Coronary Artery, Three Arteries, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02723EZ | Dilation of Coronary Artery, Three Arteries with Two Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02723F6 | Dilation of Coronary Artery, Three Arteries, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02723FZ | Dilation of Coronary Artery, Three Arteries with Three Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02723G6 | Dilation of Coronary Artery, Three Arteries, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02723GZ | Dilation of Coronary Artery, Three Arteries with Four or More Intraluminal Devices, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02723T6 | Dilation of Coronary Artery, Three Arteries, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02723TZ | Dilation of Coronary Artery, Three Arteries with Radioactive Intraluminal Device, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02723Z6 | Dilation of Coronary Artery, Three Arteries, Bifurcation, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02723ZZ | Dilation of Coronary Artery, Three Arteries, Percutaneous Approach | Procedure | ICD-10-PCS |
| 0272446 | Dilation of Coronary Artery, Three Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 027244Z | Dilation of Coronary Artery, Three Arteries with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| 0272456 | Dilation of Coronary Artery, Three Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 027245Z | Dilation of Coronary Artery, Three Arteries with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0272466 | Dilation of Coronary Artery, Three Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 027246Z | Dilation of Coronary Artery, Three Arteries with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0272476 | Dilation of Coronary Artery, Three Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 027247Z | Dilation of Coronary Artery, Three Arteries with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02724D6 | Dilation of Coronary Artery, Three Arteries, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02724DZ | Dilation of Coronary Artery, Three Arteries with Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02724E6 | Dilation of Coronary Artery, Three Arteries, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02724EZ | Dilation of Coronary Artery, Three Arteries with Two Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02724F6 | Dilation of Coronary Artery, Three Arteries, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02724FZ | Dilation of Coronary Artery, Three Arteries with Three Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02724G6 | Dilation of Coronary Artery, Three Arteries, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02724GZ | Dilation of Coronary Artery, Three Arteries with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02724T6 | Dilation of Coronary Artery, Three Arteries, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02724TZ | Dilation of Coronary Artery, Three Arteries with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02724Z6 | Dilation of Coronary Artery, Three Arteries, Bifurcation, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02724ZZ | Dilation of Coronary Artery, Three Arteries, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0273046 | Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| 02733ZZ | Dilation of Coronary Artery, Four or More Arteries, Percutaneous Approach | Procedure | ICD-10-PCS |
| 0273446 | Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 027344Z | Dilation of Coronary Artery, Four or More Arteries with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0273456 | Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 027345Z | Dilation of Coronary Artery, Four or More Arteries with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0273466 | Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 027346Z | Dilation of Coronary Artery, Four or More Arteries with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0273476 | Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 027347Z | Dilation of Coronary Artery, Four or More Arteries with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02734D6 | Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02734DZ | Dilation of Coronary Artery, Four or More Arteries with Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02734E6 | Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02734EZ | Dilation of Coronary Artery, Four or More Arteries with Two Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02734F6 | Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02734FZ | Dilation of Coronary Artery, Four or More Arteries with Three Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02734G6 | Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02734GZ | Dilation of Coronary Artery, Four or More Arteries with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02734T6 | Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02734TZ | Dilation of Coronary Artery, Four or More Arteries with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| 02734Z6 | Dilation of Coronary Artery, Four or More Arteries, Bifurcation, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02734ZZ | Dilation of Coronary Artery, Four or More Arteries, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02C00Z6 | Extirpation of Matter from Coronary Artery, One Artery, Bifurcation, Open Approach | Procedure | ICD-10-PCS |
| 02C00ZZ | Extirpation of Matter from Coronary Artery, One Artery, Open Approach | Procedure | ICD-10-PCS |
| 02C03Z6 | Extirpation of Matter from Coronary Artery, One Artery, Bifurcation, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02C03ZZ | Extirpation of Matter from Coronary Artery, One Artery, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02C04Z6 | Extirpation of Matter from Coronary Artery, One Artery, Bifurcation, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02C04ZZ | Extirpation of Matter from Coronary Artery, One Artery, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02C10Z6 | Extirpation of Matter from Coronary Artery, Two Arteries, Bifurcation, Open Approach | Procedure | ICD-10-PCS |
| 02C10ZZ | Extirpation of Matter from Coronary Artery, Two Arteries, Open Approach | Procedure | ICD-10-PCS |
| 02C13Z6 | Extirpation of Matter from Coronary Artery, Two Arteries, Bifurcation, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02C13ZZ | Extirpation of Matter from Coronary Artery, Two Arteries, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02C14Z6 | Extirpation of Matter from Coronary Artery, Two Arteries, Bifurcation, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02C14ZZ | Extirpation of Matter from Coronary Artery, Two Arteries, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02C20Z6 | Extirpation of Matter from Coronary Artery, Three Arteries, Bifurcation, Open Approach | Procedure | ICD-10-PCS |
| 02C20ZZ | Extirpation of Matter from Coronary Artery, Three Arteries, Open Approach | Procedure | ICD-10-PCS |
| 02C23Z6 | Extirpation of Matter from Coronary Artery, Three Arteries, Bifurcation, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02C23ZZ | Extirpation of Matter from Coronary Artery, Three Arteries, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02C24Z6 | Extirpation of Matter from Coronary Artery, Three Arteries, Bifurcation, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02C24ZZ | Extirpation of Matter from Coronary Artery, Three Arteries, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02C30Z6 | Extirpation of Matter from Coronary Artery, Four or More Arteries, Bifurcation, Open Approach | Procedure | ICD-10-PCS |
| 02C30ZZ | Extirpation of Matter from Coronary Artery, Four or More Arteries, Open Approach | Procedure | ICD-10-PCS |
| 02C33Z6 | Extirpation of Matter from Coronary Artery, Four or More Arteries, Bifurcation, Percutaneous Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| 02C33ZZ | Extirpation of Matter from Coronary Artery, Four or More Arteries, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02C34Z6 | Extirpation of Matter from Coronary Artery, Four or More Arteries, Bifurcation, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 02C34ZZ | Extirpation of Matter from Coronary Artery, Four or More Arteries, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 3E07017 | Introduction of Other Thrombolytic into Coronary Artery, Open Approach | Procedure | ICD-10-PCS |
| 3E070PZ | Introduction of Platelet Inhibitor into Coronary Artery, Open Approach | Procedure | ICD-10-PCS |
| 3E07317 | Introduction of Other Thrombolytic into Coronary Artery, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E073PZ | Introduction of Platelet Inhibitor into Coronary Artery, Percutaneous Approach | Procedure | ICD-10-PCS |
| G8451 | Beta-blocker therapy for LVEF < 40% not prescribed for reasons documented by the clinician (e.g., low blood pressure, fluid overload, asthma, patients recently treated with an intravenous positive inotropic agent, allergy, intolerance, other medical reasons, patient declined, other patient reasons, or other reasons attributable to the health care system) | Procedure | HCPCS |
| G8694 | Left+D2:D835 ventricular ejection fraction (LVEF) < 40% | Procedure | HCPCS |
| G8738 | Left ventricular ejection fraction (LVEF) < 40% or documentation of severely or moderately depressed left ventricular systolic function | Procedure | HCPCS |
| G8923 | Left ventricular ejection fraction (LVEF) < 40% or documentation of moderately or severely depressed left ventricular systolic function | Procedure | HCPCS |
| G8934 | Left ventricular ejection fraction (LVEF) < 40% or documentation of moderately or severely depressed left ventricular systolic function | Procedure | HCPCS |
| I01 | Rheumatic fever with heart involvement | Diagnosis | ICD-10-CM |
| I01.0 | Acute rheumatic pericarditis | Diagnosis | ICD-10-CM |
| I01.1 | Acute rheumatic endocarditis | Diagnosis | ICD-10-CM |
| I01.2 | Acute rheumatic myocarditis | Diagnosis | ICD-10-CM |
| I01.8 | Other acute rheumatic heart disease | Diagnosis | ICD-10-CM |
| I01.9 | Acute rheumatic heart disease, unspecified | Diagnosis | ICD-10-CM |
| I02.0 | Rheumatic chorea with heart involvement | Diagnosis | ICD-10-CM |
| I05 | Rheumatic mitral valve diseases | Diagnosis | ICD-10-CM |
| I05.0 | Rheumatic mitral stenosis | Diagnosis | ICD-10-CM |
| I05.1 | Rheumatic mitral insufficiency | Diagnosis | ICD-10-CM |
| I05.2 | Rheumatic mitral stenosis with insufficiency | Diagnosis | ICD-10-CM |
| I05.8 | Other rheumatic mitral valve diseases | Diagnosis | ICD-10-CM |
| I05.9 | Rheumatic mitral valve disease, unspecified | Diagnosis | ICD-10-CM |
| I06 | Rheumatic aortic valve diseases | Diagnosis | ICD-10-CM |
| I06.0 | Rheumatic aortic stenosis | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| I06.1 | Rheumatic aortic insufficiency | Diagnosis | ICD-10-CM |
| I06.2 | Rheumatic aortic stenosis with insufficiency | Diagnosis | ICD-10-CM |
| I06.8 | Other rheumatic aortic valve diseases | Diagnosis | ICD-10-CM |
| I06.9 | Rheumatic aortic valve disease, unspecified | Diagnosis | ICD-10-CM |
| I07 | Rheumatic tricuspid valve diseases | Diagnosis | ICD-10-CM |
| I07.0 | Rheumatic tricuspid stenosis | Diagnosis | ICD-10-CM |
| I07.1 | Rheumatic tricuspid insufficiency | Diagnosis | ICD-10-CM |
| I07.2 | Rheumatic tricuspid stenosis and insufficiency | Diagnosis | ICD-10-CM |
| I07.8 | Other rheumatic tricuspid valve diseases | Diagnosis | ICD-10-CM |
| I07.9 | Rheumatic tricuspid valve disease, unspecified | Diagnosis | ICD-10-CM |
| I08 | Multiple valve diseases | Diagnosis | ICD-10-CM |
| I08.0 | Rheumatic disorders of both mitral and aortic valves | Diagnosis | ICD-10-CM |
| I08.1 | Rheumatic disorders of both mitral and tricuspid valves | Diagnosis | ICD-10-CM |
| I08.2 | Rheumatic disorders of both aortic and tricuspid valves | Diagnosis | ICD-10-CM |
| I08.3 | Combined rheumatic disorders of mitral, aortic and tricuspid valves | Diagnosis | ICD-10-CM |
| I08.8 | Other rheumatic multiple valve diseases | Diagnosis | ICD-10-CM |
| I08.9 | Rheumatic multiple valve disease, unspecified | Diagnosis | ICD-10-CM |
| I09 | Other rheumatic heart diseases | Diagnosis | ICD-10-CM |
| I09.0 | Rheumatic myocarditis | Diagnosis | ICD-10-CM |
| I09.1 | Rheumatic diseases of endocardium, valve unspecified | Diagnosis | ICD-10-CM |
| I09.2 | Chronic rheumatic pericarditis | Diagnosis | ICD-10-CM |
| I09.8 | Other specified rheumatic heart diseases | Diagnosis | ICD-10-CM |
| I09.81 | Rheumatic heart failure | Diagnosis | ICD-10-CM |
| I09.89 | Other specified rheumatic heart diseases | Diagnosis | ICD-10-CM |
| I09.9 | Rheumatic heart disease, unspecified | Diagnosis | ICD-10-CM |
| I11.0 | Hypertensive heart disease with heart failure | Diagnosis | ICD-10-CM |
| 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 | Diagnosis | ICD-10-CM |
| I13.2 | Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease | Diagnosis | ICD-10-CM |
| I20 | Angina pectoris | Diagnosis | ICD-10-CM |
| I20.0 | Unstable angina | Diagnosis | ICD-10-CM |
| I20.1 | Angina pectoris with documented spasm | Diagnosis | ICD-10-CM |
| I20.8 | Other forms of angina pectoris | Diagnosis | ICD-10-CM |
| I20.9 | Angina pectoris, unspecified | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| I21 | Acute myocardial infarction | Diagnosis | ICD-10-CM |
| I21.0 | ST elevation (STEMI) myocardial infarction of anterior wall | Diagnosis | ICD-10-CM |
| I21.01 | ST elevation (STEMI) myocardial infarction involving left main coronary artery | Diagnosis | ICD-10-CM |
| I21.02 | ST elevation (STEMI) myocardial infarction involving left anterior descending coronary artery | Diagnosis | ICD-10-CM |
| I21.09 | ST elevation (STEMI) myocardial infarction involving other coronary artery of anterior wall | Diagnosis | ICD-10-CM |
| I21.1 | ST elevation (STEMI) myocardial infarction of inferior wall | Diagnosis | ICD-10-CM |
| I21.11 | ST elevation (STEMI) myocardial infarction involving right coronary artery | Diagnosis | ICD-10-CM |
| I21.19 | ST elevation (STEMI) myocardial infarction involving other coronary artery of inferior wall | Diagnosis | ICD-10-CM |
| I21.2 | ST elevation (STEMI) myocardial infarction of other sites | Diagnosis | ICD-10-CM |
| I21.21 | ST elevation (STEMI) myocardial infarction involving left circumflex coronary artery | Diagnosis | ICD-10-CM |
| I21.29 | ST elevation (STEMI) myocardial infarction involving other sites | Diagnosis | ICD-10-CM |
| I21.3 | ST elevation (STEMI) myocardial infarction of unspecified site | Diagnosis | ICD-10-CM |
| I21.4 | Non-ST elevation (NSTEMI) myocardial infarction | Diagnosis | ICD-10-CM |
| I21.9 | Acute myocardial infarction, unspecified | Diagnosis | ICD-10-CM |
| I21.A | Other type of myocardial infarction | Diagnosis | ICD-10-CM |
| I21.A1 | Myocardial infarction type 2 | Diagnosis | ICD-10-CM |
| I21.A9 | Other myocardial infarction type | Diagnosis | ICD-10-CM |
| I22 | Subsequent ST elevation (STEMI) and non-ST elevation (NSTEMI) myocardial infarction | Diagnosis | ICD-10-CM |
| I22.0 | Subsequent ST elevation (STEMI) myocardial infarction of anterior wall | Diagnosis | ICD-10-CM |
| I22.1 | Subsequent ST elevation (STEMI) myocardial infarction of inferior wall | Diagnosis | ICD-10-CM |
| I22.2 | Subsequent non-ST elevation (NSTEMI) myocardial infarction | Diagnosis | ICD-10-CM |
| I22.8 | Subsequent ST elevation (STEMI) myocardial infarction of other sites | Diagnosis | ICD-10-CM |
| I22.9 | Subsequent ST elevation (STEMI) myocardial infarction of unspecified site | Diagnosis | ICD-10-CM |
| I23 | Certain current complications following ST elevation (STEMI) and non-ST elevation (NSTEMI) myocardial infarction (within the 28 day period) | Diagnosis | ICD-10-CM |
| I23.0 | Hemopericardium as current complication following acute myocardial infarction | Diagnosis | ICD-10-CM |
| I23.1 | Atrial septal defect as current complication following acute myocardial infarction | Diagnosis | ICD-10-CM |
| I23.2 | Ventricular septal defect as current complication following acute myocardial infarction | Diagnosis | ICD-10-CM |
| I23.3 | Rupture of cardiac wall without hemopericardium as current complication following acute myocardial infarction | Diagnosis | ICD-10-CM |
| I23.4 | Rupture of chordae tendineae as current complication following acute myocardial infarction | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| I23.5 | Rupture of papillary muscle as current complication following acute myocardial infarction | Diagnosis | ICD-10-CM |
| I23.6 | Thrombosis of atrium, auricular appendage, and ventricle as current complications following acute myocardial infarction | Diagnosis | ICD-10-CM |
| I23.7 | Postinfarction angina | Diagnosis | ICD-10-CM |
| I23.8 | Other current complications following acute myocardial infarction | Diagnosis | ICD-10-CM |
| I24 | Other acute ischemic heart diseases | Diagnosis | ICD-10-CM |
| I24.0 | Acute coronary thrombosis not resulting in myocardial infarction | Diagnosis | ICD-10-CM |
| I24.1 | Dressler's syndrome | Diagnosis | ICD-10-CM |
| I24.8 | Other forms of acute ischemic heart disease | Diagnosis | ICD-10-CM |
| I24.9 | Acute ischemic heart disease, unspecified | Diagnosis | ICD-10-CM |
| I25 | Chronic ischemic heart disease | Diagnosis | ICD-10-CM |
| I25.1 | Atherosclerotic heart disease of native coronary artery | Diagnosis | ICD-10-CM |
| I25.10 | Atherosclerotic heart disease of native coronary artery without angina pectoris | Diagnosis | ICD-10-CM |
| I25.11 | Atherosclerotic heart disease of native coronary artery with angina pectoris | Diagnosis | ICD-10-CM |
| I25.110 | Atherosclerotic heart disease of native coronary artery with unstable angina pectoris | Diagnosis | ICD-10-CM |
| I25.111 | Atherosclerotic heart disease of native coronary artery with angina pectoris with documented spasm | Diagnosis | ICD-10-CM |
| I25.118 | Atherosclerotic heart disease of native coronary artery with other forms of angina pectoris | Diagnosis | ICD-10-CM |
| I25.119 | Atherosclerotic heart disease of native coronary artery with unspecified angina pectoris | Diagnosis | ICD-10-CM |
| I25.2 | Old myocardial infarction | Diagnosis | ICD-10-CM |
| I25.3 | Aneurysm of heart | Diagnosis | ICD-10-CM |
| I25.4 | Coronary artery aneurysm and dissection | Diagnosis | ICD-10-CM |
| I25.41 | Coronary artery aneurysm | Diagnosis | ICD-10-CM |
| I25.42 | Coronary artery dissection | Diagnosis | ICD-10-CM |
| I25.5 | Ischemic cardiomyopathy | Diagnosis | ICD-10-CM |
| I25.6 | Silent myocardial ischemia | Diagnosis | ICD-10-CM |
| I25.7 | Atherosclerosis of coronary artery bypass graft(s) and coronary artery of transplanted | Diagnosis | ICD-10-CM |
| I25.70 | Atherosclerosis of coronary artery bypass graft(s), unspecified, with angina pectoris | Diagnosis | ICD-10-CM |
| I25.700 | Atherosclerosis of coronary artery bypass graft(s), unspecified, with unstable angina pectoris | Diagnosis | ICD-10-CM |
| I25.701 | Atherosclerosis of coronary artery bypass graft(s), unspecified, with angina pectoris with documented spasm | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| I25.708 | Atherosclerosis of coronary artery bypass graft(s), unspecified, with other forms of angina pectoris | Diagnosis | ICD-10-CM |
| I25.709 | Atherosclerosis of coronary artery bypass graft(s), unspecified, with unspecified angina pectoris | Diagnosis | ICD-10-CM |
| I25.71 | Atherosclerosis of autologous vein coronary artery bypass graft(s) with angina pectoris | Diagnosis | ICD-10-CM |
| I25.710 | Atherosclerosis of autologous vein coronary artery bypass graft(s) with unstable angina pectoris | Diagnosis | ICD-10-CM |
| I25.711 | Atherosclerosis of autologous vein coronary artery bypass graft(s) with angina pectoris with documented spasm | Diagnosis | ICD-10-CM |
| I25.718 | Atherosclerosis of autologous vein coronary artery bypass graft(s) with other forms of angina pectoris | Diagnosis | ICD-10-CM |
| I25.719 | Atherosclerosis of autologous vein coronary artery bypass graft(s) with unspecified angina pectoris | Diagnosis | ICD-10-CM |
| I25.72 | Atherosclerosis of autologous artery coronary artery bypass graft(s) with angina pectoris | Diagnosis | ICD-10-CM |
| I25.720 | Atherosclerosis of autologous artery coronary artery bypass graft(s) with unstable angina pectoris | Diagnosis | ICD-10-CM |
| I25.721 | Atherosclerosis of autologous artery coronary artery bypass graft(s) with angina pectoris with documented spasm | Diagnosis | ICD-10-CM |
| I25.728 | Atherosclerosis of autologous artery coronary artery bypass graft(s) with other forms of angina pectoris | Diagnosis | ICD-10-CM |
| I25.729 | Atherosclerosis of autologous artery coronary artery bypass graft(s) with unspecified angina pectoris | Diagnosis | ICD-10-CM |
| I25.73 | Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with angina pectoris | Diagnosis | ICD-10-CM |
| I25.730 | Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with unstable angina pectoris | Diagnosis | ICD-10-CM |
| I25.731 | Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with angina pectoris with documented spasm | Diagnosis | ICD-10-CM |
| I25.738 | Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with other forms of angina pectoris | Diagnosis | ICD-10-CM |
| I25.739 | Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with unspecified angina pectoris | Diagnosis | ICD-10-CM |
| I25.75 | Atherosclerosis of native coronary artery of transplanted heart with angina pectoris | Diagnosis | ICD-10-CM |
| I25.750 | Atherosclerosis of native coronary artery of transplanted heart with unstable angina | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| I25.751 | Atherosclerosis of native coronary artery of transplanted heart with angina pectoris with documented spasm | Diagnosis | ICD-10-CM |
| I25.758 | Atherosclerosis of native coronary artery of transplanted heart with other forms of angina pectoris | Diagnosis | ICD-10-CM |
| I25.759 | Atherosclerosis of native coronary artery of transplanted heart with unspecified angina pectoris | Diagnosis | ICD-10-CM |
| I25.76 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with angina pectoris | Diagnosis | ICD-10-CM |
| I25.760 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with unstable angina | Diagnosis | ICD-10-CM |
| I25.761 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with angina pectoris with documented spasm | Diagnosis | ICD-10-CM |
| I25.768 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with other forms of angina pectoris | Diagnosis | ICD-10-CM |
| I25.769 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with unspecified angina pectoris | Diagnosis | ICD-10-CM |
| I25.79 | Atherosclerosis of other coronary artery bypass graft(s) with angina pectoris | Diagnosis | ICD-10-CM |
| I25.790 | Atherosclerosis of other coronary artery bypass graft(s) with unstable angina pectoris | Diagnosis | ICD-10-CM |
| I25.791 | Atherosclerosis of other coronary artery bypass graft(s) with angina pectoris with documented spasm | Diagnosis | ICD-10-CM |
| I25.798 | Atherosclerosis of other coronary artery bypass graft(s) with other forms of angina pectoris | Diagnosis | ICD-10-CM |
| I25.799 | Atherosclerosis of other coronary artery bypass graft(s) with unspecified angina pectoris | Diagnosis | ICD-10-CM |
| I25.8 | Other forms of chronic ischemic heart disease | Diagnosis | ICD-10-CM |
| I25.81 | Atherosclerosis of other coronary vessels without angina pectoris | Diagnosis | ICD-10-CM |
| I25.810 | Atherosclerosis of coronary artery bypass graft(s) without angina pectoris | Diagnosis | ICD-10-CM |
| I25.811 | Atherosclerosis of native coronary artery of transplanted heart without angina pectoris | Diagnosis | ICD-10-CM |
| I25.812 | Atherosclerosis of bypass graft of coronary artery of transplanted heart without angina pectoris | Diagnosis | ICD-10-CM |
| I25.82 | Chronic total occlusion of coronary artery | Diagnosis | ICD-10-CM |
| I25.83 | Coronary atherosclerosis due to lipid rich plaque | Diagnosis | ICD-10-CM |
| I25.84 | Coronary atherosclerosis due to calcified coronary lesion | Diagnosis | ICD-10-CM |
| I25.89 | Other forms of chronic ischemic heart disease | Diagnosis | ICD-10-CM |
| I25.9 | Chronic ischemic heart disease, unspecified | Diagnosis | ICD-10-CM |
| I27.1 | Kyphoscoliotic heart disease | Diagnosis | ICD-10-CM |
| I27.8 | Other specified pulmonary heart diseases | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| I27.81 | Cor pulmonale (chronic) | Diagnosis | ICD-10-CM |
| I27.83 | Eisenmenger's syndrome | Diagnosis | ICD-10-CM |
| I31.0 | Chronic adhesive pericarditis | Diagnosis | ICD-10-CM |
| I31.1 | Chronic constrictive pericarditis | Diagnosis | ICD-10-CM |
| I34 | Nonrheumatic mitral valve disorders | Diagnosis | ICD-10-CM |
| I34.0 | Nonrheumatic mitral (valve) insufficiency | Diagnosis | ICD-10-CM |
| I34.1 | Nonrheumatic mitral (valve) prolapse | Diagnosis | ICD-10-CM |
| I34.2 | Nonrheumatic mitral (valve) stenosis | Diagnosis | ICD-10-CM |
| I34.8 | Other nonrheumatic mitral valve disorders | Diagnosis | ICD-10-CM |
| I34.9 | Nonrheumatic mitral valve disorder, unspecified | Diagnosis | ICD-10-CM |
| I35 | Nonrheumatic aortic valve disorders | Diagnosis | ICD-10-CM |
| I35.0 | Nonrheumatic aortic (valve) stenosis | Diagnosis | ICD-10-CM |
| I35.1 | Nonrheumatic aortic (valve) insufficiency | Diagnosis | ICD-10-CM |
| I35.2 | Nonrheumatic aortic (valve) stenosis with insufficiency | Diagnosis | ICD-10-CM |
| I35.8 | Other nonrheumatic aortic valve disorders | Diagnosis | ICD-10-CM |
| I35.9 | Nonrheumatic aortic valve disorder, unspecified | Diagnosis | ICD-10-CM |
| I36 | Nonrheumatic tricuspid valve disorders | Diagnosis | ICD-10-CM |
| I36.0 | Nonrheumatic tricuspid (valve) stenosis | Diagnosis | ICD-10-CM |
| I36.1 | Nonrheumatic tricuspid (valve) insufficiency | Diagnosis | ICD-10-CM |
| I36.2 | Nonrheumatic tricuspid (valve) stenosis with insufficiency | Diagnosis | ICD-10-CM |
| I36.8 | Other nonrheumatic tricuspid valve disorders | Diagnosis | ICD-10-CM |
| I36.9 | Nonrheumatic tricuspid valve disorder, unspecified | Diagnosis | ICD-10-CM |
| I37 | Nonrheumatic pulmonary valve disorders | Diagnosis | ICD-10-CM |
| I37.0 | Nonrheumatic pulmonary valve stenosis | Diagnosis | ICD-10-CM |
| I37.1 | Nonrheumatic pulmonary valve insufficiency | Diagnosis | ICD-10-CM |
| I37.2 | Nonrheumatic pulmonary valve stenosis with insufficiency | Diagnosis | ICD-10-CM |
| I37.8 | Other nonrheumatic pulmonary valve disorders | Diagnosis | ICD-10-CM |
| I37.9 | Nonrheumatic pulmonary valve disorder, unspecified | Diagnosis | ICD-10-CM |
| I42.0 | Dilated cardiomyopathy | Diagnosis | ICD-10-CM |
| I42.1 | Obstructive hypertrophic cardiomyopathy | Diagnosis | ICD-10-CM |
| I42.2 | Other hypertrophic cardiomyopathy | Diagnosis | ICD-10-CM |
| I42.3 | Endomyocardial (eosinophilic) disease | Diagnosis | ICD-10-CM |
| I42.4 | Endocardial fibroelastosis | Diagnosis | ICD-10-CM |
| I42.5 | Other restrictive cardiomyopathy | Diagnosis | ICD-10-CM |
| I42.6 | Alcoholic cardiomyopathy | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| I42.7 | Cardiomyopathy due to drug and external agent | Diagnosis | ICD-10-CM |
| I42.8 | Other cardiomyopathies | Diagnosis | ICD-10-CM |
| I42.9 | Cardiomyopathy, unspecified | Diagnosis | ICD-10-CM |
| I43 | Cardiomyopathy in diseases classified elsewhere | Diagnosis | ICD-10-CM |
| I44.2 | Atrioventricular block, complete | Diagnosis | ICD-10-CM |
| I45.6 | Pre-excitation syndrome | Diagnosis | ICD-10-CM |
| I45.81 | Long QT syndrome | Diagnosis | ICD-10-CM |
| I45.89 | Other specified conduction disorders | Diagnosis | ICD-10-CM |
| I45.9 | Conduction disorder, unspecified | Diagnosis | ICD-10-CM |
| I46 | Cardiac arrest | Diagnosis | ICD-10-CM |
| I46.2 | Cardiac arrest due to underlying cardiac condition | Diagnosis | ICD-10-CM |
| I46.8 | Cardiac arrest due to other underlying condition | Diagnosis | ICD-10-CM |
| I46.9 | Cardiac arrest, cause unspecified | Diagnosis | ICD-10-CM |
| I47 | Paroxysmal tachycardia | Diagnosis | ICD-10-CM |
| I47.0 | Re-entry ventricular arrhythmia | Diagnosis | ICD-10-CM |
| I47.1 | Supraventricular tachycardia | Diagnosis | ICD-10-CM |
| I47.2 | Ventricular tachycardia | Diagnosis | ICD-10-CM |
| I47.9 | Paroxysmal tachycardia, unspecified | Diagnosis | ICD-10-CM |
| I48.0 | Paroxysmal atrial fibrillation | Diagnosis | ICD-10-CM |
| I48.1 | Persistent atrial fibrillation | Diagnosis | ICD-10-CM |
| I48.11 | Longstanding persistent atrial fibrillation | Diagnosis | ICD-10-CM |
| I48.19 | Other persistent atrial fibrillation | Diagnosis | ICD-10-CM |
| I48.2 | Chronic atrial fibrillation | Diagnosis | ICD-10-CM |
| I48.20 | Chronic atrial fibrillation, unspecified | Diagnosis | ICD-10-CM |
| I48.21 | Permanent atrial fibrillation | Diagnosis | ICD-10-CM |
| I48.3 | Typical atrial flutter | Diagnosis | ICD-10-CM |
| I48.4 | Atypical atrial flutter | Diagnosis | ICD-10-CM |
| I48.91 | Unspecified atrial fibrillation | Diagnosis | ICD-10-CM |
| I48.92 | Unspecified atrial flutter | Diagnosis | ICD-10-CM |
| I49.0 | Ventricular fibrillation and flutter | Diagnosis | ICD-10-CM |
| I49.01 | Ventricular fibrillation | Diagnosis | ICD-10-CM |
| I49.02 | Ventricular flutter | Diagnosis | ICD-10-CM |
| I49.5 | Sick sinus syndrome | Diagnosis | ICD-10-CM |
| I49.8 | Other specified cardiac arrhythmias | Diagnosis | ICD-10-CM |
| I49.9 | Cardiac arrhythmia, unspecified | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| I50 | Heart failure | Diagnosis | ICD-10-CM |
| I50.1 | Left ventricular failure, unspecified | Diagnosis | ICD-10-CM |
| I50.2 | Systolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| I50.20 | Unspecified systolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| I50.21 | Acute systolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| I50.22 | Chronic systolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| I50.23 | Acute on chronic systolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| I50.3 | Diastolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| I50.30 | Unspecified diastolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| I50.31 | Acute diastolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| I50.32 | Chronic diastolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| I50.33 | Acute on chronic diastolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| I50.4 | Combined systolic (congestive) and diastolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| I50.40 | Unspecified combined systolic (congestive) and diastolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| I50.41 | Acute combined systolic (congestive) and diastolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| I50.42 | Chronic combined systolic (congestive) and diastolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| I50.43 | Acute on chronic combined systolic (congestive) and diastolic (congestive) heart failure | Diagnosis | ICD-10-CM |
| I50.8 | Other heart failure | Diagnosis | ICD-10-CM |
| I50.81 | Right heart failure | Diagnosis | ICD-10-CM |
| I50.810 | Right heart failure, unspecified | Diagnosis | ICD-10-CM |
| I50.811 | Acute right heart failure | Diagnosis | ICD-10-CM |
| I50.812 | Chronic right heart failure | Diagnosis | ICD-10-CM |
| I50.813 | Acute on chronic right heart failure | Diagnosis | ICD-10-CM |
| I50.814 | Right heart failure due to left heart failure | Diagnosis | ICD-10-CM |
| I50.82 | Biventricular heart failure | Diagnosis | ICD-10-CM |
| I50.83 | High output heart failure | Diagnosis | ICD-10-CM |
| I50.84 | End stage heart failure | Diagnosis | ICD-10-CM |
| I50.89 | Other heart failure | Diagnosis | ICD-10-CM |
| I50.9 | Heart failure, unspecified | Diagnosis | ICD-10-CM |
| I51 | Complications and ill-defined descriptions of heart disease | Diagnosis | ICD-10-CM |
| I51.0 | Cardiac septal defect, acquired | Diagnosis | ICD-10-CM |
| I51.1 | Rupture of chordae tendineae, not elsewhere classified | Diagnosis | ICD-10-CM |
| I51.2 | Rupture of papillary muscle, not elsewhere classified | Diagnosis | ICD-10-CM |
| I51.3 | Intracardiac thrombosis, not elsewhere classified | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------------------------------|---|---------------|-----------|
| I51.4 | Myocarditis, unspecified | Diagnosis | ICD-10-CM |
| I51.5 | Myocardial degeneration | Diagnosis | ICD-10-CM |
| I51.7 | Cardiomegaly | Diagnosis | ICD-10-CM |
| I51.8 | Other ill-defined heart diseases | Diagnosis | ICD-10-CM |
| I51.81 | Takotsubo syndrome | Diagnosis | ICD-10-CM |
| I51.89 | Other ill-defined heart diseases | Diagnosis | ICD-10-CM |
| I51.9 | Heart disease, unspecified | Diagnosis | ICD-10-CM |
| I52 | Other heart disorders in diseases classified elsewhere | Diagnosis | ICD-10-CM |
| T86.22 | Heart transplant failure | Diagnosis | ICD-10-CM |
| Z95.1 | Presence of aortocoronary bypass graft | Diagnosis | ICD-10-CM |
| Z95.5 | Presence of coronary angioplasty implant and graft | Diagnosis | ICD-10-CM |
| Z98.61 | Coronary angioplasty status | Diagnosis | ICD-10-CM |
| Cerebrovascular Disease | | | |
| G45 | Transient cerebral ischemic attacks and related syndromes | Diagnosis | ICD-10-CM |
| G45.0 | Vertebro-basilar artery syndrome | Diagnosis | ICD-10-CM |
| G45.1 | Carotid artery syndrome (hemispheric) | Diagnosis | ICD-10-CM |
| G45.2 | Multiple and bilateral precerebral artery syndromes | Diagnosis | ICD-10-CM |
| G45.3 | Amaurosis fugax | Diagnosis | ICD-10-CM |
| G45.4 | Transient global amnesia | Diagnosis | ICD-10-CM |
| G45.8 | Other transient cerebral ischemic attacks and related syndromes | Diagnosis | ICD-10-CM |
| G45.9 | Transient cerebral ischemic attack, unspecified | Diagnosis | ICD-10-CM |
| I61 | Nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I61.0 | Nontraumatic intracerebral hemorrhage in hemisphere, subcortical | Diagnosis | ICD-10-CM |
| I61.1 | Nontraumatic intracerebral hemorrhage in hemisphere, cortical | Diagnosis | ICD-10-CM |
| I61.2 | Nontraumatic intracerebral hemorrhage in hemisphere, unspecified | Diagnosis | ICD-10-CM |
| I61.3 | Nontraumatic intracerebral hemorrhage in brain stem | Diagnosis | ICD-10-CM |
| I61.4 | Nontraumatic intracerebral hemorrhage in cerebellum | Diagnosis | ICD-10-CM |
| I61.5 | Nontraumatic intracerebral hemorrhage, intraventricular | Diagnosis | ICD-10-CM |
| I61.6 | Nontraumatic intracerebral hemorrhage, multiple localized | Diagnosis | ICD-10-CM |
| I61.8 | Other nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I61.9 | Nontraumatic intracerebral hemorrhage, unspecified | Diagnosis | ICD-10-CM |
| I63 | Cerebral infarction | Diagnosis | ICD-10-CM |
| I63.0 | Cerebral infarction due to thrombosis of precerebral arteries | Diagnosis | ICD-10-CM |
| I63.00 | Cerebral infarction due to thrombosis of unspecified precerebral artery | Diagnosis | ICD-10-CM |
| I63.01 | Cerebral infarction due to thrombosis of vertebral artery | Diagnosis | ICD-10-CM |
| I63.011 | Cerebral infarction due to thrombosis of right vertebral artery | Diagnosis | ICD-10-CM |
| I63.012 | Cerebral infarction due to thrombosis of left vertebral artery | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| I63.013 | Cerebral infarction due to thrombosis of bilateral vertebral arteries | Diagnosis | ICD-10-CM |
| I63.019 | Cerebral infarction due to thrombosis of unspecified vertebral artery | Diagnosis | ICD-10-CM |
| I63.02 | Cerebral infarction due to thrombosis of basilar artery | Diagnosis | ICD-10-CM |
| I63.03 | Cerebral infarction due to thrombosis of carotid artery | Diagnosis | ICD-10-CM |
| I63.031 | Cerebral infarction due to thrombosis of right carotid artery | Diagnosis | ICD-10-CM |
| I63.032 | Cerebral infarction due to thrombosis of left carotid artery | Diagnosis | ICD-10-CM |
| I63.033 | Cerebral infarction due to thrombosis of bilateral carotid arteries | Diagnosis | ICD-10-CM |
| I63.039 | Cerebral infarction due to thrombosis of unspecified carotid artery | Diagnosis | ICD-10-CM |
| I63.09 | Cerebral infarction due to thrombosis of other precerebral artery | Diagnosis | ICD-10-CM |
| I63.1 | Cerebral infarction due to embolism of precerebral arteries | Diagnosis | ICD-10-CM |
| I63.10 | Cerebral infarction due to embolism of unspecified precerebral artery | Diagnosis | ICD-10-CM |
| I63.11 | Cerebral infarction due to embolism of vertebral artery | Diagnosis | ICD-10-CM |
| I63.111 | Cerebral infarction due to embolism of right vertebral artery | Diagnosis | ICD-10-CM |
| I63.112 | Cerebral infarction due to embolism of left vertebral artery | Diagnosis | ICD-10-CM |
| I63.113 | Cerebral infarction due to embolism of bilateral vertebral arteries | Diagnosis | ICD-10-CM |
| I63.119 | Cerebral infarction due to embolism of unspecified vertebral artery | Diagnosis | ICD-10-CM |
| I63.12 | Cerebral infarction due to embolism of basilar artery | Diagnosis | ICD-10-CM |
| I63.13 | Cerebral infarction due to embolism of carotid artery | Diagnosis | ICD-10-CM |
| I63.131 | Cerebral infarction due to embolism of right carotid artery | Diagnosis | ICD-10-CM |
| I63.132 | Cerebral infarction due to embolism of left carotid artery | Diagnosis | ICD-10-CM |
| I63.133 | Cerebral infarction due to embolism of bilateral carotid arteries | Diagnosis | ICD-10-CM |
| I63.139 | Cerebral infarction due to embolism of unspecified carotid artery | Diagnosis | ICD-10-CM |
| I63.19 | Cerebral infarction due to embolism of other precerebral artery | Diagnosis | ICD-10-CM |
| I63.2 | Cerebral infarction due to unspecified occlusion or stenosis of precerebral arteries | Diagnosis | ICD-10-CM |
| I63.20 | Cerebral infarction due to unspecified occlusion or stenosis of unspecified precerebral | Diagnosis | ICD-10-CM |
| I63.21 | Cerebral infarction due to unspecified occlusion or stenosis of vertebral arteries | Diagnosis | ICD-10-CM |
| I63.211 | Cerebral infarction due to unspecified occlusion or stenosis of right vertebral artery | Diagnosis | ICD-10-CM |
| I63.212 | Cerebral infarction due to unspecified occlusion or stenosis of left vertebral artery | Diagnosis | ICD-10-CM |
| I63.213 | Cerebral infarction due to unspecified occlusion or stenosis of bilateral vertebral | Diagnosis | ICD-10-CM |
| I63.219 | Cerebral infarction due to unspecified occlusion or stenosis of unspecified vertebral | Diagnosis | ICD-10-CM |
| I63.22 | Cerebral infarction due to unspecified occlusion or stenosis of basilar artery | Diagnosis | ICD-10-CM |
| I63.23 | Cerebral infarction due to unspecified occlusion or stenosis of carotid arteries | Diagnosis | ICD-10-CM |
| I63.231 | Cerebral infarction due to unspecified occlusion or stenosis of right carotid arteries | Diagnosis | ICD-10-CM |
| I63.232 | Cerebral infarction due to unspecified occlusion or stenosis of left carotid arteries | Diagnosis | ICD-10-CM |
| I63.233 | Cerebral infarction due to unspecified occlusion or stenosis of bilateral carotid arteries | Diagnosis | ICD-10-CM |
| I63.239 | Cerebral infarction due to unspecified occlusion or stenosis of unspecified carotid | Diagnosis | ICD-10-CM |
| I63.29 | Cerebral infarction due to unspecified occlusion or stenosis of other precerebral | Diagnosis | ICD-10-CM |
| I63.3 | Cerebral infarction due to thrombosis of cerebral arteries | Diagnosis | ICD-10-CM |
| I63.30 | Cerebral infarction due to thrombosis of unspecified cerebral artery | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| I63.31 | Cerebral infarction due to thrombosis of middle cerebral artery | Diagnosis | ICD-10-CM |
| I63.311 | Cerebral infarction due to thrombosis of right middle cerebral artery | Diagnosis | ICD-10-CM |
| I63.312 | Cerebral infarction due to thrombosis of left middle cerebral artery | Diagnosis | ICD-10-CM |
| I63.313 | Cerebral infarction due to thrombosis of bilateral middle cerebral arteries | Diagnosis | ICD-10-CM |
| I63.319 | Cerebral infarction due to thrombosis of unspecified middle cerebral artery | Diagnosis | ICD-10-CM |
| I63.32 | Cerebral infarction due to thrombosis of anterior cerebral artery | Diagnosis | ICD-10-CM |
| I63.321 | Cerebral infarction due to thrombosis of right anterior cerebral artery | Diagnosis | ICD-10-CM |
| I63.322 | Cerebral infarction due to thrombosis of left anterior cerebral artery | Diagnosis | ICD-10-CM |
| I63.323 | Cerebral infarction due to thrombosis of bilateral anterior cerebral arteries | Diagnosis | ICD-10-CM |
| I63.329 | Cerebral infarction due to thrombosis of unspecified anterior cerebral artery | Diagnosis | ICD-10-CM |
| I63.33 | Cerebral infarction due to thrombosis of posterior cerebral artery | Diagnosis | ICD-10-CM |
| I63.331 | Cerebral infarction due to thrombosis of right posterior cerebral artery | Diagnosis | ICD-10-CM |
| I63.332 | Cerebral infarction due to thrombosis of left posterior cerebral artery | Diagnosis | ICD-10-CM |
| I63.333 | Cerebral infarction due to thrombosis of bilateral posterior cerebral arteries | Diagnosis | ICD-10-CM |
| I63.339 | Cerebral infarction due to thrombosis of unspecified posterior cerebral artery | Diagnosis | ICD-10-CM |
| I63.34 | Cerebral infarction due to thrombosis of cerebellar artery | Diagnosis | ICD-10-CM |
| I63.341 | Cerebral infarction due to thrombosis of right cerebellar artery | Diagnosis | ICD-10-CM |
| I63.342 | Cerebral infarction due to thrombosis of left cerebellar artery | Diagnosis | ICD-10-CM |
| I63.343 | Cerebral infarction due to thrombosis of bilateral cerebellar arteries | Diagnosis | ICD-10-CM |
| I63.349 | Cerebral infarction due to thrombosis of unspecified cerebellar artery | Diagnosis | ICD-10-CM |
| I63.39 | Cerebral infarction due to thrombosis of other cerebral artery | Diagnosis | ICD-10-CM |
| I63.4 | Cerebral infarction due to embolism of cerebral arteries | Diagnosis | ICD-10-CM |
| I63.40 | Cerebral infarction due to embolism of unspecified cerebral artery | Diagnosis | ICD-10-CM |
| I63.41 | Cerebral infarction due to embolism of middle cerebral artery | Diagnosis | ICD-10-CM |
| I63.411 | Cerebral infarction due to embolism of right middle cerebral artery | Diagnosis | ICD-10-CM |
| I63.412 | Cerebral infarction due to embolism of left middle cerebral artery | Diagnosis | ICD-10-CM |
| I63.413 | Cerebral infarction due to embolism of bilateral middle cerebral arteries | Diagnosis | ICD-10-CM |
| I63.419 | Cerebral infarction due to embolism of unspecified middle cerebral artery | Diagnosis | ICD-10-CM |
| I63.42 | Cerebral infarction due to embolism of anterior cerebral artery | Diagnosis | ICD-10-CM |
| I63.421 | Cerebral infarction due to embolism of right anterior cerebral artery | Diagnosis | ICD-10-CM |
| I63.422 | Cerebral infarction due to embolism of left anterior cerebral artery | Diagnosis | ICD-10-CM |
| I63.423 | Cerebral infarction due to embolism of bilateral anterior cerebral arteries | Diagnosis | ICD-10-CM |
| I63.429 | Cerebral infarction due to embolism of unspecified anterior cerebral artery | Diagnosis | ICD-10-CM |
| I63.43 | Cerebral infarction due to embolism of posterior cerebral artery | Diagnosis | ICD-10-CM |
| I63.431 | Cerebral infarction due to embolism of right posterior cerebral artery | Diagnosis | ICD-10-CM |
| I63.432 | Cerebral infarction due to embolism of left posterior cerebral artery | Diagnosis | ICD-10-CM |
| I63.433 | Cerebral infarction due to embolism of bilateral posterior cerebral arteries | Diagnosis | ICD-10-CM |
| I63.439 | Cerebral infarction due to embolism of unspecified posterior cerebral artery | Diagnosis | ICD-10-CM |
| I63.44 | Cerebral infarction due to embolism of cerebellar artery | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| I63.441 | Cerebral infarction due to embolism of right cerebellar artery | Diagnosis | ICD-10-CM |
| I63.442 | Cerebral infarction due to embolism of left cerebellar artery | Diagnosis | ICD-10-CM |
| I63.443 | Cerebral infarction due to embolism of bilateral cerebellar arteries | Diagnosis | ICD-10-CM |
| I63.449 | Cerebral infarction due to embolism of unspecified cerebellar artery | Diagnosis | ICD-10-CM |
| I63.49 | Cerebral infarction due to embolism of other cerebral artery | Diagnosis | ICD-10-CM |
| I63.5 | Cerebral infarction due to unspecified occlusion or stenosis of cerebral arteries | Diagnosis | ICD-10-CM |
| I63.50 | Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebral | Diagnosis | ICD-10-CM |
| I63.51 | Cerebral infarction due to unspecified occlusion or stenosis of middle cerebral artery | Diagnosis | ICD-10-CM |
| I63.511 | Cerebral infarction due to unspecified occlusion or stenosis of right middle cerebral | Diagnosis | ICD-10-CM |
| I63.512 | Cerebral infarction due to unspecified occlusion or stenosis of left middle cerebral | Diagnosis | ICD-10-CM |
| I63.513 | Cerebral infarction due to unspecified occlusion or stenosis of bilateral middle cerebral | Diagnosis | ICD-10-CM |
| I63.519 | Cerebral infarction due to unspecified occlusion or stenosis of unspecified middle | Diagnosis | ICD-10-CM |
| I63.52 | Cerebral infarction due to unspecified occlusion or stenosis of anterior cerebral artery | Diagnosis | ICD-10-CM |
| I63.521 | Cerebral infarction due to unspecified occlusion or stenosis of right anterior cerebral | Diagnosis | ICD-10-CM |
| I63.522 | Cerebral infarction due to unspecified occlusion or stenosis of left anterior cerebral | Diagnosis | ICD-10-CM |
| I63.523 | Cerebral infarction due to unspecified occlusion or stenosis of bilateral anterior | Diagnosis | ICD-10-CM |
| I63.529 | Cerebral infarction due to unspecified occlusion or stenosis of unspecified anterior | Diagnosis | ICD-10-CM |
| I63.53 | Cerebral infarction due to unspecified occlusion or stenosis of posterior cerebral artery | Diagnosis | ICD-10-CM |
| I63.531 | Cerebral infarction due to unspecified occlusion or stenosis of right posterior cerebral | Diagnosis | ICD-10-CM |
| I63.532 | Cerebral infarction due to unspecified occlusion or stenosis of left posterior cerebral | Diagnosis | ICD-10-CM |
| I63.533 | Cerebral infarction due to unspecified occlusion or stenosis of bilateral posterior | Diagnosis | ICD-10-CM |
| I63.539 | Cerebral infarction due to unspecified occlusion or stenosis of unspecified posterior | Diagnosis | ICD-10-CM |
| I63.54 | Cerebral infarction due to unspecified occlusion or stenosis of cerebellar artery | Diagnosis | ICD-10-CM |
| I63.541 | Cerebral infarction due to unspecified occlusion or stenosis of right cerebellar artery | Diagnosis | ICD-10-CM |
| I63.542 | Cerebral infarction due to unspecified occlusion or stenosis of left cerebellar artery | Diagnosis | ICD-10-CM |
| I63.543 | Cerebral infarction due to unspecified occlusion or stenosis of bilateral cerebellar | Diagnosis | ICD-10-CM |
| I63.549 | Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebellar | Diagnosis | ICD-10-CM |
| I63.59 | Cerebral infarction due to unspecified occlusion or stenosis of other cerebral artery | Diagnosis | ICD-10-CM |
| I63.6 | Cerebral infarction due to cerebral venous thrombosis, nonpyogenic | Diagnosis | ICD-10-CM |
| I63.8 | Other cerebral infarction | Diagnosis | ICD-10-CM |
| I63.81 | Other cerebral infarction due to occlusion or stenosis of small artery | Diagnosis | ICD-10-CM |
| I63.89 | Other cerebral infarction | Diagnosis | ICD-10-CM |
| I63.9 | Cerebral infarction, unspecified | Diagnosis | ICD-10-CM |
| I69 | Sequelae of cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.0 | Sequelae of nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.00 | Unspecified sequelae of nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.01 | Cognitive deficits following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.010 | Attention and concentration deficit following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| I69.011 | Memory deficit following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.012 | Visuospatial deficit and spatial neglect following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.013 | Psychomotor deficit following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.014 | Frontal lobe and executive function deficit following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.015 | Cognitive social or emotional deficit following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.018 | Other symptoms and signs involving cognitive functions following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.019 | Unspecified symptoms and signs involving cognitive functions following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.02 | Speech and language deficits following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.020 | Aphasia following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.021 | Dysphasia following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.022 | Dysarthria following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.023 | Fluency disorder following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.028 | Other speech and language deficits following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.03 | Monoplegia of upper limb following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.031 | Monoplegia of upper limb following nontraumatic subarachnoid hemorrhage affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.032 | Monoplegia of upper limb following nontraumatic subarachnoid hemorrhage affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.033 | Monoplegia of upper limb following nontraumatic subarachnoid hemorrhage affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.034 | Monoplegia of upper limb following nontraumatic subarachnoid hemorrhage affecting left non-dominant side | Diagnosis | ICD-10-CM |
| I69.039 | Monoplegia of upper limb following nontraumatic subarachnoid hemorrhage affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.04 | Monoplegia of lower limb following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.041 | Monoplegia of lower limb following nontraumatic subarachnoid hemorrhage affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.042 | Monoplegia of lower limb following nontraumatic subarachnoid hemorrhage affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.043 | Monoplegia of lower limb following nontraumatic subarachnoid hemorrhage affecting right non-dominant side | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| I69.044 | Monoplegia of lower limb following nontraumatic subarachnoid hemorrhage affecting left non-dominant side | Diagnosis | ICD-10-CM |
| I69.049 | Monoplegia of lower limb following nontraumatic subarachnoid hemorrhage affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.05 | Hemiplegia and hemiparesis following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.051 | Hemiplegia and hemiparesis following nontraumatic subarachnoid hemorrhage affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.052 | Hemiplegia and hemiparesis following nontraumatic subarachnoid hemorrhage affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.053 | Hemiplegia and hemiparesis following nontraumatic subarachnoid hemorrhage affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.054 | Hemiplegia and hemiparesis following nontraumatic subarachnoid hemorrhage affecting left non-dominant side | Diagnosis | ICD-10-CM |
| I69.059 | Hemiplegia and hemiparesis following nontraumatic subarachnoid hemorrhage affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.06 | Other paralytic syndrome following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.061 | Other paralytic syndrome following nontraumatic subarachnoid hemorrhage affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.062 | Other paralytic syndrome following nontraumatic subarachnoid hemorrhage affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.063 | Other paralytic syndrome following nontraumatic subarachnoid hemorrhage affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.064 | Other paralytic syndrome following nontraumatic subarachnoid hemorrhage affecting left non-dominant side | Diagnosis | ICD-10-CM |
| I69.065 | Other paralytic syndrome following nontraumatic subarachnoid hemorrhage, bilateral | Diagnosis | ICD-10-CM |
| I69.069 | Other paralytic syndrome following nontraumatic subarachnoid hemorrhage affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.09 | Other sequelae of nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.090 | Apraxia following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.091 | Dysphagia following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.092 | Facial weakness following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.093 | Ataxia following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.098 | Other sequelae following nontraumatic subarachnoid hemorrhage | Diagnosis | ICD-10-CM |
| I69.1 | Sequelae of nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.10 | Unspecified sequelae of nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.11 | Cognitive deficits following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.110 | Attention and concentration deficit following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.111 | Memory deficit following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| I69.112 | Visuospatial deficit and spatial neglect following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.113 | Psychomotor deficit following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.114 | Frontal lobe and executive function deficit following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.115 | Cognitive social or emotional deficit following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.118 | Other symptoms and signs involving cognitive functions following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.119 | Unspecified symptoms and signs involving cognitive functions following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.12 | Speech and language deficits following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.120 | Aphasia following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.121 | Dysphasia following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.122 | Dysarthria following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.123 | Fluency disorder following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.128 | Other speech and language deficits following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.13 | Monoplegia of upper limb following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.131 | Monoplegia of upper limb following nontraumatic intracerebral hemorrhage affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.132 | Monoplegia of upper limb following nontraumatic intracerebral hemorrhage affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.133 | Monoplegia of upper limb following nontraumatic intracerebral hemorrhage affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.134 | Monoplegia of upper limb following nontraumatic intracerebral hemorrhage affecting left non-dominant side | Diagnosis | ICD-10-CM |
| I69.139 | Monoplegia of upper limb following nontraumatic intracerebral hemorrhage affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.14 | Monoplegia of lower limb following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.141 | Monoplegia of lower limb following nontraumatic intracerebral hemorrhage affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.142 | Monoplegia of lower limb following nontraumatic intracerebral hemorrhage affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.143 | Monoplegia of lower limb following nontraumatic intracerebral hemorrhage affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.144 | Monoplegia of lower limb following nontraumatic intracerebral hemorrhage affecting left non-dominant side | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| I69.149 | Monoplegia of lower limb following nontraumatic intracerebral hemorrhage affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.15 | Hemiplegia and hemiparesis following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.151 | Hemiplegia and hemiparesis following nontraumatic intracerebral hemorrhage affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.152 | Hemiplegia and hemiparesis following nontraumatic intracerebral hemorrhage affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.153 | Hemiplegia and hemiparesis following nontraumatic intracerebral hemorrhage affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.154 | Hemiplegia and hemiparesis following nontraumatic intracerebral hemorrhage affecting left non-dominant side | Diagnosis | ICD-10-CM |
| I69.159 | Hemiplegia and hemiparesis following nontraumatic intracerebral hemorrhage affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.16 | Other paralytic syndrome following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.161 | Other paralytic syndrome following nontraumatic intracerebral hemorrhage affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.162 | Other paralytic syndrome following nontraumatic intracerebral hemorrhage affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.163 | Other paralytic syndrome following nontraumatic intracerebral hemorrhage affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.164 | Other paralytic syndrome following nontraumatic intracerebral hemorrhage affecting left non-dominant side | Diagnosis | ICD-10-CM |
| I69.165 | Other paralytic syndrome following nontraumatic intracerebral hemorrhage, bilateral | Diagnosis | ICD-10-CM |
| I69.169 | Other paralytic syndrome following nontraumatic intracerebral hemorrhage affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.19 | Other sequelae of nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.190 | Apraxia following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.191 | Dysphagia following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.192 | Facial weakness following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.193 | Ataxia following nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.198 | Other sequelae of nontraumatic intracerebral hemorrhage | Diagnosis | ICD-10-CM |
| I69.2 | Sequelae of other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.20 | Unspecified sequelae of other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.21 | Cognitive deficits following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.210 | Attention and concentration deficit following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.211 | Memory deficit following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| I69.212 | Visuospatial deficit and spatial neglect following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.213 | Psychomotor deficit following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.214 | Frontal lobe and executive function deficit following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.215 | Cognitive social or emotional deficit following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.218 | Other symptoms and signs involving cognitive functions following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.219 | Unspecified symptoms and signs involving cognitive functions following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.22 | Speech and language deficits following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.220 | Aphasia following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.221 | Dysphasia following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.222 | Dysarthria following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.223 | Fluency disorder following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.228 | Other speech and language deficits following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.23 | Monoplegia of upper limb following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.231 | Monoplegia of upper limb following other nontraumatic intracranial hemorrhage affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.232 | Monoplegia of upper limb following other nontraumatic intracranial hemorrhage affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.233 | Monoplegia of upper limb following other nontraumatic intracranial hemorrhage affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.234 | Monoplegia of upper limb following other nontraumatic intracranial hemorrhage affecting left non-dominant side | Diagnosis | ICD-10-CM |
| I69.239 | Monoplegia of upper limb following other nontraumatic intracranial hemorrhage affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.24 | Monoplegia of lower limb following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.241 | Monoplegia of lower limb following other nontraumatic intracranial hemorrhage affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.242 | Monoplegia of lower limb following other nontraumatic intracranial hemorrhage affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.243 | Monoplegia of lower limb following other nontraumatic intracranial hemorrhage affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.244 | Monoplegia of lower limb following other nontraumatic intracranial hemorrhage affecting left non-dominant side | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| I69.249 | Monoplegia of lower limb following other nontraumatic intracranial hemorrhage affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.25 | Hemiplegia and hemiparesis following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.251 | Hemiplegia and hemiparesis following other nontraumatic intracranial hemorrhage affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.252 | Hemiplegia and hemiparesis following other nontraumatic intracranial hemorrhage affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.253 | Hemiplegia and hemiparesis following other nontraumatic intracranial hemorrhage affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.254 | Hemiplegia and hemiparesis following other nontraumatic intracranial hemorrhage affecting left non-dominant side | Diagnosis | ICD-10-CM |
| I69.259 | Hemiplegia and hemiparesis following other nontraumatic intracranial hemorrhage affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.26 | Other paralytic syndrome following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.261 | Other paralytic syndrome following other nontraumatic intracranial hemorrhage affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.262 | Other paralytic syndrome following other nontraumatic intracranial hemorrhage affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.263 | Other paralytic syndrome following other nontraumatic intracranial hemorrhage affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.264 | Other paralytic syndrome following other nontraumatic intracranial hemorrhage affecting left non-dominant side | Diagnosis | ICD-10-CM |
| I69.265 | Other paralytic syndrome following other nontraumatic intracranial hemorrhage, bilateral | Diagnosis | ICD-10-CM |
| I69.269 | Other paralytic syndrome following other nontraumatic intracranial hemorrhage affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.29 | Other sequelae of other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.290 | Apraxia following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.291 | Dysphagia following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.292 | Facial weakness following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.293 | Ataxia following other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.298 | Other sequelae of other nontraumatic intracranial hemorrhage | Diagnosis | ICD-10-CM |
| I69.3 | Sequelae of cerebral infarction | Diagnosis | ICD-10-CM |
| I69.30 | Unspecified sequelae of cerebral infarction | Diagnosis | ICD-10-CM |
| I69.31 | Cognitive deficits following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.310 | Attention and concentration deficit following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.311 | Memory deficit following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.312 | Visuospatial deficit and spatial neglect following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.313 | Psychomotor deficit following cerebral infarction | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| I69.314 | Frontal lobe and executive function deficit following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.315 | Cognitive social or emotional deficit following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.318 | Other symptoms and signs involving cognitive functions following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.319 | Unspecified symptoms and signs involving cognitive functions following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.32 | Speech and language deficits following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.320 | Aphasia following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.321 | Dysphasia following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.322 | Dysarthria following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.323 | Fluency disorder following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.328 | Other speech and language deficits following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.33 | Monoplegia of upper limb following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.331 | Monoplegia of upper limb following cerebral infarction affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.332 | Monoplegia of upper limb following cerebral infarction affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.333 | Monoplegia of upper limb following cerebral infarction affecting right non-dominant | Diagnosis | ICD-10-CM |
| I69.334 | Monoplegia of upper limb following cerebral infarction affecting left non-dominant | Diagnosis | ICD-10-CM |
| I69.339 | Monoplegia of upper limb following cerebral infarction affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.34 | Monoplegia of lower limb following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.341 | Monoplegia of lower limb following cerebral infarction affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.342 | Monoplegia of lower limb following cerebral infarction affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.343 | Monoplegia of lower limb following cerebral infarction affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.344 | Monoplegia of lower limb following cerebral infarction affecting left non-dominant side | Diagnosis | ICD-10-CM |
| I69.349 | Monoplegia of lower limb following cerebral infarction affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.35 | Hemiplegia and hemiparesis following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.351 | Hemiplegia and hemiparesis following cerebral infarction affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.352 | Hemiplegia and hemiparesis following cerebral infarction affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.353 | Hemiplegia and hemiparesis following cerebral infarction affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.354 | Hemiplegia and hemiparesis following cerebral infarction affecting left non-dominant side | Diagnosis | ICD-10-CM |
| I69.359 | Hemiplegia and hemiparesis following cerebral infarction affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.36 | Other paralytic syndrome following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.361 | Other paralytic syndrome following cerebral infarction affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.362 | Other paralytic syndrome following cerebral infarction affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.363 | Other paralytic syndrome following cerebral infarction affecting right non-dominant | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| I69.364 | Other paralytic syndrome following cerebral infarction affecting left non-dominant | Diagnosis | ICD-10-CM |
| I69.365 | Other paralytic syndrome following cerebral infarction, bilateral | Diagnosis | ICD-10-CM |
| I69.369 | Other paralytic syndrome following cerebral infarction affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.39 | Other sequelae of cerebral infarction | Diagnosis | ICD-10-CM |
| I69.390 | Apraxia following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.391 | Dysphagia following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.392 | Facial weakness following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.393 | Ataxia following cerebral infarction | Diagnosis | ICD-10-CM |
| I69.398 | Other sequelae of cerebral infarction | Diagnosis | ICD-10-CM |
| I69.8 | Sequelae of other cerebrovascular diseases | Diagnosis | ICD-10-CM |
| I69.80 | Unspecified sequelae of other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.81 | Cognitive deficits following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.810 | Attention and concentration deficit following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.811 | Memory deficit following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.812 | Visuospatial deficit and spatial neglect following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.813 | Psychomotor deficit following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.814 | Frontal lobe and executive function deficit following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.815 | Cognitive social or emotional deficit following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.818 | Other symptoms and signs involving cognitive functions following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.819 | Unspecified symptoms and signs involving cognitive functions following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.82 | Speech and language deficits following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.820 | Aphasia following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.821 | Dysphasia following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.822 | Dysarthria following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.823 | Fluency disorder following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.828 | Other speech and language deficits following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.83 | Monoplegia of upper limb following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.831 | Monoplegia of upper limb following other cerebrovascular disease affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.832 | Monoplegia of upper limb following other cerebrovascular disease affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.833 | Monoplegia of upper limb following other cerebrovascular disease affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.834 | Monoplegia of upper limb following other cerebrovascular disease affecting left non-dominant side | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| I69.839 | Monoplegia of upper limb following other cerebrovascular disease affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.84 | Monoplegia of lower limb following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.841 | Monoplegia of lower limb following other cerebrovascular disease affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.842 | Monoplegia of lower limb following other cerebrovascular disease affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.843 | Monoplegia of lower limb following other cerebrovascular disease affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.844 | Monoplegia of lower limb following other cerebrovascular disease affecting left non-dominant side | Diagnosis | ICD-10-CM |
| I69.849 | Monoplegia of lower limb following other cerebrovascular disease affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.85 | Hemiplegia and hemiparesis following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.851 | Hemiplegia and hemiparesis following other cerebrovascular disease affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.852 | Hemiplegia and hemiparesis following other cerebrovascular disease affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.853 | Hemiplegia and hemiparesis following other cerebrovascular disease affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.854 | Hemiplegia and hemiparesis following other cerebrovascular disease affecting left non-dominant side | Diagnosis | ICD-10-CM |
| I69.859 | Hemiplegia and hemiparesis following other cerebrovascular disease affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.86 | Other paralytic syndrome following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.861 | Other paralytic syndrome following other cerebrovascular disease affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.862 | Other paralytic syndrome following other cerebrovascular disease affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.863 | Other paralytic syndrome following other cerebrovascular disease affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.864 | Other paralytic syndrome following other cerebrovascular disease affecting left non-dominant side | Diagnosis | ICD-10-CM |
| I69.865 | Other paralytic syndrome following other cerebrovascular disease, bilateral | Diagnosis | ICD-10-CM |
| I69.869 | Other paralytic syndrome following other cerebrovascular disease affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.89 | Other sequelae of other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.890 | Apraxia following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.891 | Dysphagia following other cerebrovascular disease | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| I69.892 | Facial weakness following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.893 | Ataxia following other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.898 | Other sequelae of other cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.9 | Sequelae of unspecified cerebrovascular diseases | Diagnosis | ICD-10-CM |
| I69.90 | Unspecified sequelae of unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.91 | Cognitive deficits following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.910 | Attention and concentration deficit following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.911 | Memory deficit following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.912 | Visuospatial deficit and spatial neglect following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.913 | Psychomotor deficit following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.914 | Frontal lobe and executive function deficit following unspecified cerebrovascular | Diagnosis | ICD-10-CM |
| I69.915 | Cognitive social or emotional deficit following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.918 | Other symptoms and signs involving cognitive functions following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.919 | Unspecified symptoms and signs involving cognitive functions following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.92 | Speech and language deficits following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.920 | Aphasia following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.921 | Dysphasia following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.922 | Dysarthria following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.923 | Fluency disorder following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.928 | Other speech and language deficits following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.93 | Monoplegia of upper limb following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.931 | Monoplegia of upper limb following unspecified cerebrovascular disease affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.932 | Monoplegia of upper limb following unspecified cerebrovascular disease affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.933 | Monoplegia of upper limb following unspecified cerebrovascular disease affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.934 | Monoplegia of upper limb following unspecified cerebrovascular disease affecting left non-dominant side | Diagnosis | ICD-10-CM |
| I69.939 | Monoplegia of upper limb following unspecified cerebrovascular disease affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.94 | Monoplegia of lower limb following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.941 | Monoplegia of lower limb following unspecified cerebrovascular disease affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.942 | Monoplegia of lower limb following unspecified cerebrovascular disease affecting left dominant side | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| I69.943 | Monoplegia of lower limb following unspecified cerebrovascular disease affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.944 | Monoplegia of lower limb following unspecified cerebrovascular disease affecting left non-dominant side | Diagnosis | ICD-10-CM |
| I69.949 | Monoplegia of lower limb following unspecified cerebrovascular disease affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.95 | Hemiplegia and hemiparesis following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.951 | Hemiplegia and hemiparesis following unspecified cerebrovascular disease affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.952 | Hemiplegia and hemiparesis following unspecified cerebrovascular disease affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.953 | Hemiplegia and hemiparesis following unspecified cerebrovascular disease affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.954 | Hemiplegia and hemiparesis following unspecified cerebrovascular disease affecting left non-dominant side | Diagnosis | ICD-10-CM |
| I69.959 | Hemiplegia and hemiparesis following unspecified cerebrovascular disease affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.96 | Other paralytic syndrome following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.961 | Other paralytic syndrome following unspecified cerebrovascular disease affecting right dominant side | Diagnosis | ICD-10-CM |
| I69.962 | Other paralytic syndrome following unspecified cerebrovascular disease affecting left dominant side | Diagnosis | ICD-10-CM |
| I69.963 | Other paralytic syndrome following unspecified cerebrovascular disease affecting right non-dominant side | Diagnosis | ICD-10-CM |
| I69.964 | Other paralytic syndrome following unspecified cerebrovascular disease affecting left non-dominant side | Diagnosis | ICD-10-CM |
| I69.965 | Other paralytic syndrome following unspecified cerebrovascular disease, bilateral | Diagnosis | ICD-10-CM |
| I69.969 | Other paralytic syndrome following unspecified cerebrovascular disease affecting unspecified side | Diagnosis | ICD-10-CM |
| I69.99 | Other sequelae of unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.990 | Apraxia following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.991 | Dysphagia following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.992 | Facial weakness following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.993 | Ataxia following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |
| I69.998 | Other sequelae following unspecified cerebrovascular disease | Diagnosis | ICD-10-CM |

Chronic Kidney Disease

| | | | |
|--------|---|-----------|-----------|
| E08.21 | Diabetes mellitus due to underlying condition with diabetic nephropathy | Diagnosis | ICD-10-CM |
|--------|---|-----------|-----------|

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| E08.22 | Diabetes mellitus due to underlying condition with diabetic chronic kidney disease | Diagnosis | ICD-10-CM |
| E08.29 | Diabetes mellitus due to underlying condition with other diabetic kidney complication | Diagnosis | ICD-10-CM |
| E09.21 | Drug or chemical induced diabetes mellitus with diabetic nephropathy | Diagnosis | ICD-10-CM |
| E09.22 | Drug or chemical induced diabetes mellitus with diabetic chronic kidney disease | Diagnosis | ICD-10-CM |
| E09.29 | Drug or chemical induced diabetes mellitus with other diabetic kidney complication | Diagnosis | ICD-10-CM |
| E10.21 | Type 1 diabetes mellitus with diabetic nephropathy | Diagnosis | ICD-10-CM |
| E10.22 | Type 1 diabetes mellitus with diabetic chronic kidney disease | Diagnosis | ICD-10-CM |
| E10.29 | Type 1 diabetes mellitus with other diabetic kidney complication | Diagnosis | ICD-10-CM |
| E11.21 | Type 2 diabetes mellitus with diabetic nephropathy | Diagnosis | ICD-10-CM |
| E11.22 | Type 2 diabetes mellitus with diabetic chronic kidney disease | Diagnosis | ICD-10-CM |
| E11.29 | Type 2 diabetes mellitus with other diabetic kidney complication | Diagnosis | ICD-10-CM |
| E13.21 | Other specified diabetes mellitus with diabetic nephropathy | Diagnosis | ICD-10-CM |
| E13.22 | Other specified diabetes mellitus with diabetic chronic kidney disease | Diagnosis | ICD-10-CM |
| E13.29 | Other specified diabetes mellitus with other diabetic kidney complication | Diagnosis | ICD-10-CM |
| I12.0 | Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease | Diagnosis | ICD-10-CM |
| I12.9 | Hypertensive chronic kidney disease with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease | Diagnosis | ICD-10-CM |
| 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 | Diagnosis | ICD-10-CM |
| I13.1 | Hypertensive heart and chronic kidney disease without heart failure | Diagnosis | ICD-10-CM |
| 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 | Diagnosis | ICD-10-CM |
| I13.11 | Hypertensive heart and chronic kidney disease without heart failure, with stage 5 chronic kidney disease, or end stage renal disease | Diagnosis | ICD-10-CM |
| I13.2 | Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease | Diagnosis | ICD-10-CM |
| K76.7 | Hepatorenal syndrome | Diagnosis | ICD-10-CM |
| M32.14 | Glomerular disease in systemic lupus erythematosus | Diagnosis | ICD-10-CM |
| M32.15 | Tubulo-interstitial nephropathy in systemic lupus erythematosus | Diagnosis | ICD-10-CM |
| M35.04 | Sicca syndrome with tubulo-interstitial nephropathy | Diagnosis | ICD-10-CM |
| N01.0 | Rapidly progressive nephritic syndrome with minor glomerular abnormality | Diagnosis | ICD-10-CM |
| N01.1 | Rapidly progressive nephritic syndrome with focal and segmental glomerular lesions | Diagnosis | ICD-10-CM |
| N01.2 | Rapidly progressive nephritic syndrome with diffuse membranous glomerulonephritis | Diagnosis | ICD-10-CM |
| N01.3 | Rapidly progressive nephritic syndrome with diffuse mesangial proliferative glomerulonephritis | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------|--|---------------|-----------|
| N01.4 | Rapidly progressive nephritic syndrome with diffuse endocapillary proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N01.5 | Rapidly progressive nephritic syndrome with diffuse mesangiocapillary glomerulonephritis | Diagnosis | ICD-10-CM |
| N01.6 | Rapidly progressive nephritic syndrome with dense deposit disease | Diagnosis | ICD-10-CM |
| N01.7 | Rapidly progressive nephritic syndrome with diffuse crescentic glomerulonephritis | Diagnosis | ICD-10-CM |
| N01.8 | Rapidly progressive nephritic syndrome with other morphologic changes | Diagnosis | ICD-10-CM |
| N01.9 | Rapidly progressive nephritic syndrome with unspecified morphologic changes | Diagnosis | ICD-10-CM |
| N02.0 | Recurrent and persistent hematuria with minor glomerular abnormality | Diagnosis | ICD-10-CM |
| N02.1 | Recurrent and persistent hematuria with focal and segmental glomerular lesions | Diagnosis | ICD-10-CM |
| N02.2 | Recurrent and persistent hematuria with diffuse membranous glomerulonephritis | Diagnosis | ICD-10-CM |
| N02.3 | Recurrent and persistent hematuria with diffuse mesangial proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N02.4 | Recurrent and persistent hematuria with diffuse endocapillary proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N02.5 | Recurrent and persistent hematuria with diffuse mesangiocapillary glomerulonephritis | Diagnosis | ICD-10-CM |
| N02.6 | Recurrent and persistent hematuria with dense deposit disease | Diagnosis | ICD-10-CM |
| N02.7 | Recurrent and persistent hematuria with diffuse crescentic glomerulonephritis | Diagnosis | ICD-10-CM |
| N02.8 | Recurrent and persistent hematuria with other morphologic changes | Diagnosis | ICD-10-CM |
| N02.9 | Recurrent and persistent hematuria with unspecified morphologic changes | Diagnosis | ICD-10-CM |
| N03.0 | Chronic nephritic syndrome with minor glomerular abnormality | Diagnosis | ICD-10-CM |
| N03.1 | Chronic nephritic syndrome with focal and segmental glomerular lesions | Diagnosis | ICD-10-CM |
| N03.2 | Chronic nephritic syndrome with diffuse membranous glomerulonephritis | Diagnosis | ICD-10-CM |
| N03.3 | Chronic nephritic syndrome with diffuse mesangial proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N03.4 | Chronic nephritic syndrome with diffuse endocapillary proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N03.5 | Chronic nephritic syndrome with diffuse mesangiocapillary glomerulonephritis | Diagnosis | ICD-10-CM |
| N03.6 | Chronic nephritic syndrome with dense deposit disease | Diagnosis | ICD-10-CM |
| N03.7 | Chronic nephritic syndrome with diffuse crescentic glomerulonephritis | Diagnosis | ICD-10-CM |
| N03.8 | Chronic nephritic syndrome with other morphologic changes | Diagnosis | ICD-10-CM |
| N03.9 | Chronic nephritic syndrome with unspecified morphologic changes | Diagnosis | ICD-10-CM |
| N04.0 | Nephrotic syndrome with minor glomerular abnormality | Diagnosis | ICD-10-CM |
| N04.1 | Nephrotic syndrome with focal and segmental glomerular lesions | Diagnosis | ICD-10-CM |
| N04.2 | Nephrotic syndrome with diffuse membranous glomerulonephritis | Diagnosis | ICD-10-CM |
| N04.3 | Nephrotic syndrome with diffuse mesangial proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N04.4 | Nephrotic syndrome with diffuse endocapillary proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N04.5 | Nephrotic syndrome with diffuse mesangiocapillary glomerulonephritis | Diagnosis | ICD-10-CM |
| N04.6 | Nephrotic syndrome with dense deposit disease | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------|--|---------------|-----------|
| N04.7 | Nephrotic syndrome with diffuse crescentic glomerulonephritis | Diagnosis | ICD-10-CM |
| N04.8 | Nephrotic syndrome with other morphologic changes | Diagnosis | ICD-10-CM |
| N04.9 | Nephrotic syndrome with unspecified morphologic changes | Diagnosis | ICD-10-CM |
| N05.0 | Unspecified nephritic syndrome with minor glomerular abnormality | Diagnosis | ICD-10-CM |
| N05.1 | Unspecified nephritic syndrome with focal and segmental glomerular lesions | Diagnosis | ICD-10-CM |
| N05.2 | Unspecified nephritic syndrome with diffuse membranous glomerulonephritis | Diagnosis | ICD-10-CM |
| N05.3 | Unspecified nephritic syndrome with diffuse mesangial proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N05.4 | Unspecified nephritic syndrome with diffuse endocapillary proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N05.5 | Unspecified nephritic syndrome with diffuse mesangiocapillary glomerulonephritis | Diagnosis | ICD-10-CM |
| N05.6 | Unspecified nephritic syndrome with dense deposit disease | Diagnosis | ICD-10-CM |
| N05.7 | Unspecified nephritic syndrome with diffuse crescentic glomerulonephritis | Diagnosis | ICD-10-CM |
| N05.8 | Unspecified nephritic syndrome with other morphologic changes | Diagnosis | ICD-10-CM |
| N05.9 | Unspecified nephritic syndrome with unspecified morphologic changes | Diagnosis | ICD-10-CM |
| N06.0 | Isolated proteinuria with minor glomerular abnormality | Diagnosis | ICD-10-CM |
| N06.1 | Isolated proteinuria with focal and segmental glomerular lesions | Diagnosis | ICD-10-CM |
| N06.2 | Isolated proteinuria with diffuse membranous glomerulonephritis | Diagnosis | ICD-10-CM |
| N06.3 | Isolated proteinuria with diffuse mesangial proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N06.4 | Isolated proteinuria with diffuse endocapillary proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N06.5 | Isolated proteinuria with diffuse mesangiocapillary glomerulonephritis | Diagnosis | ICD-10-CM |
| N06.6 | Isolated proteinuria with dense deposit disease | Diagnosis | ICD-10-CM |
| N06.7 | Isolated proteinuria with diffuse crescentic glomerulonephritis | Diagnosis | ICD-10-CM |
| N06.8 | Isolated proteinuria with other morphologic lesion | Diagnosis | ICD-10-CM |
| N06.9 | Isolated proteinuria with unspecified morphologic lesion | Diagnosis | ICD-10-CM |
| N07.0 | Hereditary nephropathy, not elsewhere classified with minor glomerular abnormality | Diagnosis | ICD-10-CM |
| N07.1 | Hereditary nephropathy, not elsewhere classified with focal and segmental glomerular lesions | Diagnosis | ICD-10-CM |
| N07.2 | Hereditary nephropathy, not elsewhere classified with diffuse membranous glomerulonephritis | Diagnosis | ICD-10-CM |
| N07.3 | Hereditary nephropathy, not elsewhere classified with diffuse mesangial proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N07.4 | Hereditary nephropathy, not elsewhere classified with diffuse endocapillary proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N07.5 | Hereditary nephropathy, not elsewhere classified with diffuse mesangiocapillary glomerulonephritis | Diagnosis | ICD-10-CM |
| N07.6 | Hereditary nephropathy, not elsewhere classified with dense deposit disease | Diagnosis | ICD-10-CM |
| N07.7 | Hereditary nephropathy, not elsewhere classified with diffuse crescentic glomerulonephritis | Diagnosis | ICD-10-CM |
| N07.8 | Hereditary nephropathy, not elsewhere classified with other morphologic lesions | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| N07.9 | Hereditary nephropathy, not elsewhere classified with unspecified morphologic lesions | Diagnosis | ICD-10-CM |
| N08 | Glomerular disorders in diseases classified elsewhere | Diagnosis | ICD-10-CM |
| N11.0 | Nonobstructive reflux-associated chronic pyelonephritis | Diagnosis | ICD-10-CM |
| N11.1 | Chronic obstructive pyelonephritis | Diagnosis | ICD-10-CM |
| N11.8 | Other chronic tubulo-interstitial nephritis | Diagnosis | ICD-10-CM |
| N11.9 | Chronic tubulo-interstitial nephritis, unspecified | Diagnosis | ICD-10-CM |
| N12 | Tubulo-interstitial nephritis, not specified as acute or chronic | Diagnosis | ICD-10-CM |
| N15.0 | Balkan nephropathy | Diagnosis | ICD-10-CM |
| N15.8 | Other specified renal tubulo-interstitial diseases | Diagnosis | ICD-10-CM |
| N15.9 | Renal tubulo-interstitial disease, unspecified | Diagnosis | ICD-10-CM |
| N16 | Renal tubulo-interstitial disorders in diseases classified elsewhere | Diagnosis | ICD-10-CM |
| N18.1 | Chronic kidney disease, stage 1 | Diagnosis | ICD-10-CM |
| N18.2 | Chronic kidney disease, stage 2 (mild) | Diagnosis | ICD-10-CM |
| N18.3 | Chronic kidney disease, stage 3 (moderate) | Diagnosis | ICD-10-CM |
| N18.30 | Chronic kidney disease, stage 3 unspecified | Diagnosis | ICD-10-CM |
| N18.31 | Chronic kidney disease, stage 3a | Diagnosis | ICD-10-CM |
| N18.32 | Chronic kidney disease, stage 3b | Diagnosis | ICD-10-CM |
| N18.4 | Chronic kidney disease, stage 4 (severe) | Diagnosis | ICD-10-CM |
| N18.5 | Chronic kidney disease, stage 5 | Diagnosis | ICD-10-CM |
| N18.6 | End stage renal disease | Diagnosis | ICD-10-CM |
| N18.9 | Chronic kidney disease, unspecified | Diagnosis | ICD-10-CM |
| N19 | Unspecified kidney failure | Diagnosis | ICD-10-CM |
| N25.0 | Renal osteodystrophy | Diagnosis | ICD-10-CM |
| N25.1 | Nephrogenic diabetes insipidus | Diagnosis | ICD-10-CM |
| N25.81 | Secondary hyperparathyroidism of renal origin | Diagnosis | ICD-10-CM |
| N25.89 | Other disorders resulting from impaired renal tubular function | Diagnosis | ICD-10-CM |
| N25.9 | Disorder resulting from impaired renal tubular function, unspecified | Diagnosis | ICD-10-CM |
| N26.1 | Atrophy of kidney (terminal) | Diagnosis | ICD-10-CM |
| N26.9 | Renal sclerosis, unspecified | Diagnosis | ICD-10-CM |
| N28.89 | Other specified disorders of kidney and ureter | Diagnosis | ICD-10-CM |
| N28.9 | Disorder of kidney and ureter, unspecified | Diagnosis | ICD-10-CM |
| N29 | Other disorders of kidney and ureter in diseases classified elsewhere | Diagnosis | ICD-10-CM |
| O10.2 | Pre-existing hypertensive chronic kidney disease complicating pregnancy, childbirth and the puerperium | Diagnosis | ICD-10-CM |
| O10.21 | Pre-existing hypertensive chronic kidney disease complicating pregnancy | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|------------------------------|--|---------------|-----------|
| O10.211 | Pre-existing hypertensive chronic kidney disease complicating pregnancy, first trimester | Diagnosis | ICD-10-CM |
| O10.212 | Pre-existing hypertensive chronic kidney disease complicating pregnancy, second trimester | Diagnosis | ICD-10-CM |
| O10.213 | Pre-existing hypertensive chronic kidney disease complicating pregnancy, third trimester | Diagnosis | ICD-10-CM |
| O10.219 | Pre-existing hypertensive chronic kidney disease complicating pregnancy, unspecified trimester | Diagnosis | ICD-10-CM |
| O10.22 | Pre-existing hypertensive chronic kidney disease complicating childbirth | Diagnosis | ICD-10-CM |
| O10.23 | Pre-existing hypertensive chronic kidney disease complicating the puerperium | Diagnosis | ICD-10-CM |
| O10.3 | Pre-existing hypertensive heart and chronic kidney disease complicating pregnancy, childbirth and the puerperium | Diagnosis | ICD-10-CM |
| O10.31 | Pre-existing hypertensive heart and chronic kidney disease complicating pregnancy | Diagnosis | ICD-10-CM |
| O10.311 | Pre-existing hypertensive heart and chronic kidney disease complicating pregnancy, first trimester | Diagnosis | ICD-10-CM |
| O10.312 | Pre-existing hypertensive heart and chronic kidney disease complicating pregnancy, second trimester | Diagnosis | ICD-10-CM |
| O10.313 | Pre-existing hypertensive heart and chronic kidney disease complicating pregnancy, third trimester | Diagnosis | ICD-10-CM |
| O10.319 | Pre-existing hypertensive heart and chronic kidney disease complicating pregnancy, unspecified trimester | Diagnosis | ICD-10-CM |
| O10.32 | Pre-existing hypertensive heart and chronic kidney disease complicating childbirth | Diagnosis | ICD-10-CM |
| O10.33 | Pre-existing hypertensive heart and chronic kidney disease complicating the puerperium | Diagnosis | ICD-10-CM |
| Q61.02 | Congenital multiple renal cysts | Diagnosis | ICD-10-CM |
| Q61.11 | Cystic dilatation of collecting ducts | Diagnosis | ICD-10-CM |
| Q61.19 | Other polycystic kidney, infantile type | Diagnosis | ICD-10-CM |
| Q61.2 | Polycystic kidney, adult type | Diagnosis | ICD-10-CM |
| Q61.3 | Polycystic kidney, unspecified | Diagnosis | ICD-10-CM |
| Q61.4 | Renal dysplasia | Diagnosis | ICD-10-CM |
| Q61.5 | Medullary cystic kidney | Diagnosis | ICD-10-CM |
| Q61.8 | Other cystic kidney diseases | Diagnosis | ICD-10-CM |
| R94.4 | Abnormal results of kidney function studies | Diagnosis | ICD-10-CM |
| Z91.15 | Patient's noncompliance with renal dialysis | Diagnosis | ICD-10-CM |
| Z99.2 | Dependence on renal dialysis | Diagnosis | ICD-10-CM |
| Chronic Liver Disease | | | |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| B18.8 | Other chronic viral hepatitis | Diagnosis | ICD-10-CM |
| B18.9 | Chronic viral hepatitis, unspecified | Diagnosis | ICD-10-CM |
| E83.01 | Wilson's disease | Diagnosis | ICD-10-CM |
| E83.110 | Hereditary hemochromatosis | Diagnosis | ICD-10-CM |
| E88.01 | Alpha-1-antitrypsin deficiency | Diagnosis | ICD-10-CM |
| I85 | Esophageal varices | Diagnosis | ICD-10-CM |
| I85.0 | Esophageal varices | Diagnosis | ICD-10-CM |
| I85.00 | Esophageal varices without bleeding | Diagnosis | ICD-10-CM |
| I85.01 | Esophageal varices with bleeding | Diagnosis | ICD-10-CM |
| I85.1 | Secondary esophageal varices | Diagnosis | ICD-10-CM |
| I85.10 | Secondary esophageal varices without bleeding | Diagnosis | ICD-10-CM |
| I85.11 | Secondary esophageal varices with bleeding | Diagnosis | ICD-10-CM |
| I86.4 | Gastric varices | Diagnosis | ICD-10-CM |
| K65.2 | Spontaneous bacterial peritonitis | Diagnosis | ICD-10-CM |
| K70.0 | Alcoholic fatty liver | Diagnosis | ICD-10-CM |
| K70.1 | Alcoholic hepatitis | Diagnosis | ICD-10-CM |
| K70.10 | Alcoholic hepatitis without ascites | Diagnosis | ICD-10-CM |
| K70.11 | Alcoholic hepatitis with ascites | Diagnosis | ICD-10-CM |
| K70.2 | Alcoholic fibrosis and sclerosis of liver | Diagnosis | ICD-10-CM |
| K70.3 | Alcoholic cirrhosis of liver | Diagnosis | ICD-10-CM |
| K70.30 | Alcoholic cirrhosis of liver without ascites | Diagnosis | ICD-10-CM |
| K70.31 | Alcoholic cirrhosis of liver with ascites | Diagnosis | ICD-10-CM |
| K70.4 | Alcoholic hepatic failure | Diagnosis | ICD-10-CM |
| K70.40 | Alcoholic hepatic failure without coma | Diagnosis | ICD-10-CM |
| K70.41 | Alcoholic hepatic failure with coma | Diagnosis | ICD-10-CM |
| K70.9 | Alcoholic liver disease, unspecified | Diagnosis | ICD-10-CM |
| K71.0 | Toxic liver disease with cholestasis | Diagnosis | ICD-10-CM |
| K71.1 | Toxic liver disease with hepatic necrosis | Diagnosis | ICD-10-CM |
| K71.10 | Toxic liver disease with hepatic necrosis, without coma | Diagnosis | ICD-10-CM |
| K71.11 | Toxic liver disease with hepatic necrosis, with coma | Diagnosis | ICD-10-CM |
| K71.2 | Toxic liver disease with acute hepatitis | Diagnosis | ICD-10-CM |
| K71.3 | Toxic liver disease with chronic persistent hepatitis | Diagnosis | ICD-10-CM |
| K71.4 | Toxic liver disease with chronic lobular hepatitis | Diagnosis | ICD-10-CM |
| K71.5 | Toxic liver disease with chronic active hepatitis | Diagnosis | ICD-10-CM |
| K71.50 | Toxic liver disease with chronic active hepatitis without ascites | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| K71.51 | Toxic liver disease with chronic active hepatitis with ascites | Diagnosis | ICD-10-CM |
| K71.6 | Toxic liver disease with hepatitis, not elsewhere classified | Diagnosis | ICD-10-CM |
| K71.7 | Toxic liver disease with fibrosis and cirrhosis of liver | Diagnosis | ICD-10-CM |
| K71.8 | Toxic liver disease with other disorders of liver | Diagnosis | ICD-10-CM |
| K71.9 | Toxic liver disease, unspecified | Diagnosis | ICD-10-CM |
| K72.01 | Acute and subacute hepatic failure with coma | Diagnosis | ICD-10-CM |
| K72.1 | Chronic hepatic failure | Diagnosis | ICD-10-CM |
| K72.10 | Chronic hepatic failure without coma | Diagnosis | ICD-10-CM |
| K72.11 | Chronic hepatic failure with coma | Diagnosis | ICD-10-CM |
| K72.9 | Hepatic failure, unspecified | Diagnosis | ICD-10-CM |
| K72.90 | Hepatic failure, unspecified without coma | Diagnosis | ICD-10-CM |
| K72.91 | Hepatic failure, unspecified with coma | Diagnosis | ICD-10-CM |
| K73 | Chronic hepatitis, not elsewhere classified | Diagnosis | ICD-10-CM |
| K73.0 | Chronic persistent hepatitis, not elsewhere classified | Diagnosis | ICD-10-CM |
| K73.1 | Chronic lobular hepatitis, not elsewhere classified | Diagnosis | ICD-10-CM |
| K73.2 | Chronic active hepatitis, not elsewhere classified | Diagnosis | ICD-10-CM |
| K73.8 | Other chronic hepatitis, not elsewhere classified | Diagnosis | ICD-10-CM |
| K73.9 | Chronic hepatitis, unspecified | Diagnosis | ICD-10-CM |
| K74 | Fibrosis and cirrhosis of liver | Diagnosis | ICD-10-CM |
| K74.0 | Hepatic fibrosis | Diagnosis | ICD-10-CM |
| K74.1 | Hepatic sclerosis | Diagnosis | ICD-10-CM |
| K74.2 | Hepatic fibrosis with hepatic sclerosis | Diagnosis | ICD-10-CM |
| K74.3 | Primary biliary cirrhosis | Diagnosis | ICD-10-CM |
| K74.4 | Secondary biliary cirrhosis | Diagnosis | ICD-10-CM |
| K74.5 | Biliary cirrhosis, unspecified | Diagnosis | ICD-10-CM |
| K74.6 | Other and unspecified cirrhosis of liver | Diagnosis | ICD-10-CM |
| K74.60 | Unspecified cirrhosis of liver | Diagnosis | ICD-10-CM |
| K74.69 | Other cirrhosis of liver | Diagnosis | ICD-10-CM |
| K75.0 | Abscess of liver | Diagnosis | ICD-10-CM |
| K75.1 | Phlebitis of portal vein | Diagnosis | ICD-10-CM |
| K75.2 | Nonspecific reactive hepatitis | Diagnosis | ICD-10-CM |
| K75.3 | Granulomatous hepatitis, not elsewhere classified | Diagnosis | ICD-10-CM |
| K75.4 | Autoimmune hepatitis | Diagnosis | ICD-10-CM |
| K75.8 | Other specified inflammatory liver diseases | Diagnosis | ICD-10-CM |
| K75.81 | Nonalcoholic steatohepatitis (NASH) | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------------------------|--|---------------|------------|
| K75.89 | Other specified inflammatory liver diseases | Diagnosis | ICD-10-CM |
| K75.9 | Inflammatory liver disease, unspecified | Diagnosis | ICD-10-CM |
| K76.0 | Fatty (change of) liver, not elsewhere classified | Diagnosis | ICD-10-CM |
| K76.1 | Chronic passive congestion of liver | Diagnosis | ICD-10-CM |
| K76.2 | Central hemorrhagic necrosis of liver | Diagnosis | ICD-10-CM |
| K76.3 | Infarction of liver | Diagnosis | ICD-10-CM |
| K76.4 | Peliosis hepatis | Diagnosis | ICD-10-CM |
| K76.5 | Hepatic veno-occlusive disease | Diagnosis | ICD-10-CM |
| K76.6 | Portal hypertension | Diagnosis | ICD-10-CM |
| K76.7 | Hepatorenal syndrome | Diagnosis | ICD-10-CM |
| K76.8 | Other specified diseases of liver | Diagnosis | ICD-10-CM |
| K76.81 | Hepatopulmonary syndrome | Diagnosis | ICD-10-CM |
| K76.89 | Other specified diseases of liver | Diagnosis | ICD-10-CM |
| K76.9 | Liver disease, unspecified | Diagnosis | ICD-10-CM |
| K83.01 | Primary sclerosing cholangitis | Diagnosis | ICD-10-CM |
| K91.83 | Postprocedural hepatorenal syndrome | Diagnosis | ICD-10-CM |
| Z94.4 | Liver transplant status | Diagnosis | ICD-10-CM |
| Congenital Heart Disease | | | |
| 02Q50ZZ | Repair Atrial Septum, Open Approach | Procedure | ICD-10-PCS |
| 02QM0ZZ | Repair Ventricular Septum, Open Approach | Procedure | ICD-10-PCS |
| 02U507Z | Supplement Atrial Septum with Autologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02U50JZ | Supplement Atrial Septum with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02U53JZ | Supplement Atrial Septum with Synthetic Substitute, Percutaneous Approach | Procedure | ICD-10-PCS |
| 02UM07Z | Supplement Ventricular Septum with Autologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02UM0JZ | Supplement Ventricular Septum with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 02UM3JZ | Supplement Ventricular Septum with Synthetic Substitute, Percutaneous Approach | Procedure | ICD-10-PCS |
| 33647 | Repair of atrial septal defect and ventricular septal defect, with direct or patch closure | Procedure | CPT-4 |
| 33720 | Repair sinus of Valsalva aneurysm, with cardiopulmonary bypass | Procedure | CPT-4 |
| 33741 | Transcatheter atrial septostomy (TAS) for congenital cardiac anomalies to create effective atrial flow, including all imaging guidance by the proceduralist, when performed, any method (eg, Rashkind, Sang-Park, balloon, cutting balloon, blade) | Procedure | CPT-4 |
| 33745 | Transcatheter intracardiac shunt (TIS) creation by stent placement for congenital cardiac anomalies to establish effective intracardiac flow, including all imaging guidance by the proceduralist, when performed, left and right heart diagnostic cardiac catheterization for congenital cardiac anomalies, and target zone angioplasty, when performed (eg, atrial septum, Fontan fenestration, right ventricular outflow tract, Mustard/Senning/Warden baffles); initial intracardiac shunt | Procedure | CPT-4 |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------|---|---------------|-----------|
| 33746 | Transcatheter intracardiac shunt (TIS) creation by stent placement for congenital cardiac anomalies to establish effective intracardiac flow, including all imaging guidance by the proceduralist, when performed, left and right heart diagnostic cardiac catheterization for congenital cardiac anomalies, and target zone angioplasty, when performed (eg, atrial septum, Fontan fenestration, right ventricular outflow tract, Mustard/Senning/Warden baffles); each additional intracardiac shunt location (List separately in addition to code for primary procedure) | Procedure | CPT-4 |
| 33924 | Ligation and takedown of a systemic-to-pulmonary artery shunt, performed in conjunction with a congenital heart procedure (List separately in addition to code for primary procedure) | Procedure | CPT-4 |
| 75572 | Computed tomography, heart, with contrast material, for evaluation of cardiac structure and morphology (including 3D image postprocessing, assessment of cardiac function, and evaluation of venous structures, if performed) | Procedure | CPT-4 |
| 75573 | Computed tomography, heart, with contrast material, for evaluation of cardiac structure and morphology in the setting of congenital heart disease (including 3D image postprocessing, assessment of LV cardiac function, RV structure and function and evaluation of venous structures, if performed) | Procedure | CPT-4 |
| 93303 | Transthoracic echocardiography for congenital cardiac anomalies; complete | Procedure | CPT-4 |
| 93304 | Transthoracic echocardiography for congenital cardiac anomalies; follow-up or limited study | Procedure | CPT-4 |
| 93315 | Transesophageal echocardiography for congenital cardiac anomalies; including probe placement, image acquisition, interpretation and report | Procedure | CPT-4 |
| 93316 | Transesophageal echocardiography for congenital cardiac anomalies; placement of transesophageal probe only | Procedure | CPT-4 |
| 93317 | Transesophageal echocardiography for congenital cardiac anomalies; image acquisition, interpretation and report only | Procedure | CPT-4 |
| 93530 | Right heart catheterization, for congenital cardiac anomalies | Procedure | CPT-4 |
| 93531 | Combined right heart catheterization and retrograde left heart catheterization, for congenital cardiac anomalies | Procedure | CPT-4 |
| 93532 | Combined right heart catheterization and transseptal left heart catheterization through intact septum with or without retrograde left heart catheterization, for congenital cardiac anomalies | Procedure | CPT-4 |
| 93533 | Combined right heart catheterization and transseptal left heart catheterization through existing septal opening, with or without retrograde left heart catheterization, for congenital cardiac anomalies | Procedure | CPT-4 |
| 93563 | Injection procedure during cardiac catheterization including imaging supervision, interpretation, and report; for selective coronary angiography during congenital heart catheterization (List separately in addition to code for primary procedure) | Procedure | CPT-4 |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| 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) | Procedure | CPT-4 |
| 93580 | Percutaneous transcatheter closure of congenital interatrial communication (ie, Fontan fenestration, atrial septal defect) with implant | Procedure | CPT-4 |
| 93581 | Percutaneous transcatheter closure of a congenital ventricular septal defect with implant | Procedure | CPT-4 |
| I97.13 | Postprocedural heart failure | Diagnosis | ICD-10-CM |
| I97.130 | Postprocedural heart failure following cardiac surgery | Diagnosis | ICD-10-CM |
| I97.131 | Postprocedural heart failure following other surgery | Diagnosis | ICD-10-CM |
| P29.3 | Persistent fetal circulation | Diagnosis | ICD-10-CM |
| P29.38 | Other persistent fetal circulation | Diagnosis | ICD-10-CM |
| P29.8 | Other cardiovascular disorders originating in the perinatal period | Diagnosis | ICD-10-CM |
| Q20 | Congenital malformations of cardiac chambers and connections | Diagnosis | ICD-10-CM |
| Q20.0 | Common arterial trunk | Diagnosis | ICD-10-CM |
| Q20.1 | Double outlet right ventricle | Diagnosis | ICD-10-CM |
| Q20.2 | Double outlet left ventricle | Diagnosis | ICD-10-CM |
| Q20.3 | Discordant ventriculoarterial connection | Diagnosis | ICD-10-CM |
| Q20.4 | Double inlet ventricle | Diagnosis | ICD-10-CM |
| Q20.5 | Discordant atrioventricular connection | Diagnosis | ICD-10-CM |
| Q20.6 | Isomerism of atrial appendages | Diagnosis | ICD-10-CM |
| Q20.8 | Other congenital malformations of cardiac chambers and connections | Diagnosis | ICD-10-CM |
| Q20.9 | Congenital malformation of cardiac chambers and connections, unspecified | Diagnosis | ICD-10-CM |
| Q21 | Congenital malformations of cardiac septa | Diagnosis | ICD-10-CM |
| Q21.0 | Ventricular septal defect | Diagnosis | ICD-10-CM |
| Q21.1 | Atrial septal defect | Diagnosis | ICD-10-CM |
| Q21.2 | Atrioventricular septal defect | Diagnosis | ICD-10-CM |
| Q21.3 | Tetralogy of Fallot | Diagnosis | ICD-10-CM |
| Q21.4 | Aortopulmonary septal defect | Diagnosis | ICD-10-CM |
| Q21.8 | Other congenital malformations of cardiac septa | Diagnosis | ICD-10-CM |
| Q21.9 | Congenital malformation of cardiac septum, unspecified | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| Q22 | Congenital malformations of pulmonary and tricuspid valves | Diagnosis | ICD-10-CM |
| Q22.0 | Pulmonary valve atresia | Diagnosis | ICD-10-CM |
| Q22.1 | Congenital pulmonary valve stenosis | Diagnosis | ICD-10-CM |
| Q22.2 | Congenital pulmonary valve insufficiency | Diagnosis | ICD-10-CM |
| Q22.3 | Other congenital malformations of pulmonary valve | Diagnosis | ICD-10-CM |
| Q22.4 | Congenital tricuspid stenosis | Diagnosis | ICD-10-CM |
| Q22.5 | Ebstein's anomaly | Diagnosis | ICD-10-CM |
| Q22.6 | Hypoplastic right heart syndrome | Diagnosis | ICD-10-CM |
| Q22.8 | Other congenital malformations of tricuspid valve | Diagnosis | ICD-10-CM |
| Q22.9 | Congenital malformation of tricuspid valve, unspecified | Diagnosis | ICD-10-CM |
| Q23 | Congenital malformations of aortic and mitral valves | Diagnosis | ICD-10-CM |
| Q23.0 | Congenital stenosis of aortic valve | Diagnosis | ICD-10-CM |
| Q23.1 | Congenital insufficiency of aortic valve | Diagnosis | ICD-10-CM |
| Q23.2 | Congenital mitral stenosis | Diagnosis | ICD-10-CM |
| Q23.3 | Congenital mitral insufficiency | Diagnosis | ICD-10-CM |
| Q23.4 | Hypoplastic left heart syndrome | Diagnosis | ICD-10-CM |
| Q23.8 | Other congenital malformations of aortic and mitral valves | Diagnosis | ICD-10-CM |
| Q23.9 | Congenital malformation of aortic and mitral valves, unspecified | Diagnosis | ICD-10-CM |
| Q24 | Other congenital malformations of heart | Diagnosis | ICD-10-CM |
| Q24.0 | Dextrocardia | Diagnosis | ICD-10-CM |
| Q24.1 | Levocardia | Diagnosis | ICD-10-CM |
| Q24.2 | Cor triatriatum | Diagnosis | ICD-10-CM |
| Q24.3 | Pulmonary infundibular stenosis | Diagnosis | ICD-10-CM |
| Q24.4 | Congenital subaortic stenosis | Diagnosis | ICD-10-CM |
| Q24.5 | Malformation of coronary vessels | Diagnosis | ICD-10-CM |
| Q24.6 | Congenital heart block | Diagnosis | ICD-10-CM |
| Q24.8 | Other specified congenital malformations of heart | Diagnosis | ICD-10-CM |
| Q24.9 | Congenital malformation of heart, unspecified | Diagnosis | ICD-10-CM |
| Q25.0 | Patent ductus arteriosus | Diagnosis | ICD-10-CM |
| Q25.1 | Coarctation of aorta | Diagnosis | ICD-10-CM |
| Q25.21 | Interruption of aortic arch | Diagnosis | ICD-10-CM |
| Q25.29 | Other atresia of aorta | Diagnosis | ICD-10-CM |
| Q25.3 | Supravalvular aortic stenosis | Diagnosis | ICD-10-CM |
| Q25.40 | Congenital malformation of aorta unspecified | Diagnosis | ICD-10-CM |
| Q25.41 | Absence and aplasia of aorta | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| Q25.42 | Hypoplasia of aorta | Diagnosis | ICD-10-CM |
| Q25.43 | Congenital aneurysm of aorta | Diagnosis | ICD-10-CM |
| Q25.44 | Congenital dilation of aorta | Diagnosis | ICD-10-CM |
| Q25.45 | Double aortic arch | Diagnosis | ICD-10-CM |
| Q25.46 | Tortuous aortic arch | Diagnosis | ICD-10-CM |
| Q25.47 | Right aortic arch | Diagnosis | ICD-10-CM |
| Q25.48 | Anomalous origin of subclavian artery | Diagnosis | ICD-10-CM |
| Q25.49 | Other congenital malformations of aorta | Diagnosis | ICD-10-CM |
| Q25.5 | Atresia of pulmonary artery | Diagnosis | ICD-10-CM |
| Q25.6 | Stenosis of pulmonary artery | Diagnosis | ICD-10-CM |
| Q25.71 | Coarctation of pulmonary artery | Diagnosis | ICD-10-CM |
| Q25.72 | Congenital pulmonary arteriovenous malformation | Diagnosis | ICD-10-CM |
| Q25.79 | Other congenital malformations of pulmonary artery | Diagnosis | ICD-10-CM |
| Q25.8 | Other congenital malformations of other great arteries | Diagnosis | ICD-10-CM |
| Q25.9 | Congenital malformation of great arteries, unspecified | Diagnosis | ICD-10-CM |
| Q26.0 | Congenital stenosis of vena cava | Diagnosis | ICD-10-CM |
| Q26.1 | Persistent left superior vena cava | Diagnosis | ICD-10-CM |
| Q26.2 | Total anomalous pulmonary venous connection | Diagnosis | ICD-10-CM |
| Q26.3 | Partial anomalous pulmonary venous connection | Diagnosis | ICD-10-CM |
| Q26.4 | Anomalous pulmonary venous connection, unspecified | Diagnosis | ICD-10-CM |
| Q87.40 | Marfan's syndrome, unspecified | Diagnosis | ICD-10-CM |
| Q87.41 | Marfan's syndrome with cardiovascular manifestations | Diagnosis | ICD-10-CM |
| Q87.410 | Marfan's syndrome with aortic dilation | Diagnosis | ICD-10-CM |
| Q87.418 | Marfan's syndrome with other cardiovascular manifestations | Diagnosis | ICD-10-CM |
| Q87.82 | Arterial tortuosity syndrome | Diagnosis | ICD-10-CM |
| Q90.0 | Trisomy 21, nonmosaicism (meiotic nondisjunction) | Diagnosis | ICD-10-CM |
| Q90.1 | Trisomy 21, mosaicism (mitotic nondisjunction) | Diagnosis | ICD-10-CM |
| Q90.2 | Trisomy 21, translocation | Diagnosis | ICD-10-CM |
| Q90.9 | Down syndrome, unspecified | Diagnosis | ICD-10-CM |
| Q91.0 | Trisomy 18, nonmosaicism (meiotic nondisjunction) | Diagnosis | ICD-10-CM |
| Q91.1 | Trisomy 18, mosaicism (mitotic nondisjunction) | Diagnosis | ICD-10-CM |
| Q91.2 | Trisomy 18, translocation | Diagnosis | ICD-10-CM |
| Q91.3 | Trisomy 18, unspecified | Diagnosis | ICD-10-CM |
| Q91.4 | Trisomy 13, nonmosaicism (meiotic nondisjunction) | Diagnosis | ICD-10-CM |
| Q91.5 | Trisomy 13, mosaicism (mitotic nondisjunction) | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---|---|---------------|-----------|
| Q91.6 | Trisomy 13, translocation | Diagnosis | ICD-10-CM |
| Q91.7 | Trisomy 13, unspecified | Diagnosis | ICD-10-CM |
| Q93.81 | Velo-cardio-facial syndrome | Diagnosis | ICD-10-CM |
| Q93.82 | Williams syndrome | Diagnosis | ICD-10-CM |
| Chronic Obstructive Pulmonary Disease (COPD) | | | |
| J44.0 | Chronic obstructive pulmonary disease with (acute) lower respiratory infection | Diagnosis | ICD-10-CM |
| J44.1 | Chronic obstructive pulmonary disease with (acute) exacerbation | Diagnosis | ICD-10-CM |
| J44.9 | Chronic obstructive pulmonary disease, unspecified | Diagnosis | ICD-10-CM |
| COVID-19 | | | |
| U07.1 | COVID-19 | Diagnosis | ICD-10-CM |
| 94558-4 | SARS-CoV-2 (COVID-19) Ag [Presence] in Respiratory specimen by Rapid immunoassay | Laboratory | LOINC |
| 94307-6 | SARS-CoV-2 (COVID-19) N gene [Presence] in Unspecified specimen by Nucleic acid amplification using CDC primer-probe set N1 | Laboratory | LOINC |
| 94308-4 | SARS-CoV-2 (COVID-19) N gene [Presence] in Unspecified specimen by Nucleic acid amplification using CDC primer-probe set N2 | Laboratory | LOINC |
| 94309-2 | SARS-CoV-2 (COVID-19) RNA [Presence] in Unspecified specimen by NAA with probe detection | Laboratory | LOINC |
| 94314-2 | SARS-CoV-2 (COVID-19) RdRp gene [Presence] in Unspecified specimen by NAA with probe detection | Laboratory | LOINC |
| 94316-7 | SARS-CoV-2 (COVID-19) N gene [Presence] in Unspecified specimen by NAA with probe detection | Laboratory | LOINC |
| 94500-6 | SARS-CoV-2 (COVID-19) RNA [Presence] in Respiratory specimen by NAA with probe detection | Laboratory | LOINC |
| 94533-7 | SARS-CoV-2 (COVID-19) N gene [Presence] in Respiratory specimen by NAA with probe detection | Laboratory | LOINC |
| 94534-5 | SARS-CoV-2 (COVID-19) RdRp gene [Presence] in Respiratory specimen by NAA with probe detection | Laboratory | LOINC |
| 94559-2 | SARS-CoV-2 (COVID-19) ORF1ab region [Presence] in Respiratory specimen by NAA with probe detection | Laboratory | LOINC |
| 94565-9 | SARS-CoV-2 (COVID-19) RNA [Presence] in Nasopharynx by NAA with non-probe detection | Laboratory | LOINC |
| 94639-2 | SARS-CoV-2 (COVID-19) ORF1ab region [Presence] in Unspecified specimen by NAA with probe detection | Laboratory | LOINC |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|------------------------|---|---------------|-----------|
| 94640-0 | SARS-CoV-2 (COVID-19) S gene [Presence] in Respiratory specimen by NAA with probe detection | Laboratory | LOINC |
| 94641-8 | SARS-CoV-2 (COVID-19) S gene [Presence] in Unspecified specimen by NAA with probe detection | Laboratory | LOINC |
| 94660-8 | SARS-CoV-2 (COVID-19) RNA [Presence] in Serum or Plasma by NAA with probe detection | Laboratory | LOINC |
| 94756-4 | SARS-CoV-2 (COVID-19) N gene [Presence] in Respiratory specimen by Nucleic acid amplification using CDC primer-probe set N1 | Laboratory | LOINC |
| 94757-2 | SARS-CoV-2 (COVID-19) N gene [Presence] in Respiratory specimen by Nucleic acid amplification using CDC primer-probe set N2 | Laboratory | LOINC |
| 94759-8 | SARS-CoV-2 (COVID-19) RNA [Presence] in Nasopharynx by NAA with probe detection | Laboratory | LOINC |
| 94760-6 | SARS-CoV-2 (COVID-19) N gene [Presence] in Nasopharynx by NAA with probe detection | Laboratory | LOINC |
| 94766-3 | SARS-CoV-2 (COVID-19) N gene [Presence] in Serum or Plasma by NAA with probe detection | Laboratory | LOINC |
| 94767-1 | SARS-CoV-2 (COVID-19) S gene [Presence] in Serum or Plasma by NAA with probe detection | Laboratory | LOINC |
| 94822-4 | SARS-CoV-2 (COVID-19) RNA [Presence] in Saliva (oral fluid) by Sequencing | Laboratory | LOINC |
| 94845-5 | SARS-CoV-2 (COVID-19) RNA [Presence] in Saliva (oral fluid) by NAA with probe detection | Laboratory | LOINC |
| 95406-5 | SARS-CoV-2 (COVID-19) RNA [Presence] in Nose by NAA with probe detection | Laboratory | LOINC |
| 95409-9 | SARS-CoV-2 (COVID-19) N gene [Presence] in Nose by NAA with probe detection | Laboratory | LOINC |
| Cystic fibrosis | | | |
| E84 | CYSTIC FIBROSIS | Diagnosis | ICD-10-CM |
| E84.0 | CYSTIC FIBROSIS WITH PULMONARY MANIFESTATIONS | Diagnosis | ICD-10-CM |
| E84.1 | CYSTIC FIBROSIS WITH INTESTINAL MANIFESTATIONS | Diagnosis | ICD-10-CM |
| E84.11 | MECONIUM ILEUS IN CYSTIC FIBROSIS | Diagnosis | ICD-10-CM |
| E84.19 | CYSTIC FIBROSIS W/OTH INTESTINAL MANIFESTATIONS | Diagnosis | ICD-10-CM |
| E84.8 | CYSTIC FIBROSIS WITH OTHER MANIFESTATIONS | Diagnosis | ICD-10-CM |
| E84.9 | CYSTIC FIBROSIS UNSPECIFIED | Diagnosis | ICD-10-CM |
| G47.34 | Idiopathic sleep related nonobstructive alveolar hypoventilation | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-----------------|---|---------------|-----------|
| Dementia | | | |
| F01 | Vascular dementia | Diagnosis | ICD-10-CM |
| F01.5 | Vascular dementia | Diagnosis | ICD-10-CM |
| F01.50 | Vascular dementia without behavioral disturbance | Diagnosis | ICD-10-CM |
| F01.51 | Vascular dementia with behavioral disturbance | Diagnosis | ICD-10-CM |
| F02 | Dementia in other diseases classified elsewhere | Diagnosis | ICD-10-CM |
| F02.8 | Dementia in other diseases classified elsewhere | Diagnosis | ICD-10-CM |
| F02.80 | Dementia in other diseases classified elsewhere without behavioral disturbance | Diagnosis | ICD-10-CM |
| F02.81 | Dementia in other diseases classified elsewhere with behavioral disturbance | Diagnosis | ICD-10-CM |
| F03 | Unspecified dementia | Diagnosis | ICD-10-CM |
| F03.9 | Unspecified dementia | Diagnosis | ICD-10-CM |
| F03.90 | Unspecified dementia without behavioral disturbance | Diagnosis | ICD-10-CM |
| F03.91 | Unspecified dementia with behavioral disturbance | Diagnosis | ICD-10-CM |
| F10.27 | Alcohol dependence with alcohol-induced persisting dementia | Diagnosis | ICD-10-CM |
| F10.97 | Alcohol use, unspecified with alcohol-induced persisting dementia | Diagnosis | ICD-10-CM |
| F13.27 | Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced persisting dementia | Diagnosis | ICD-10-CM |
| F13.97 | Sedative, hypnotic or anxiolytic use, unspecified with sedative, hypnotic or anxiolytic-induced persisting dementia | Diagnosis | ICD-10-CM |
| F18.17 | Inhalant abuse with inhalant-induced dementia | Diagnosis | ICD-10-CM |
| F18.27 | Inhalant dependence with inhalant-induced dementia | Diagnosis | ICD-10-CM |
| F18.97 | Inhalant use, unspecified with inhalant-induced persisting dementia | Diagnosis | ICD-10-CM |
| F19.17 | Other psychoactive substance abuse with psychoactive substance-induced persisting dementia | Diagnosis | ICD-10-CM |
| F19.27 | Other psychoactive substance dependence with psychoactive substance-induced persisting dementia | Diagnosis | ICD-10-CM |
| F19.97 | Other psychoactive substance use, unspecified with psychoactive substance-induced persisting dementia | Diagnosis | ICD-10-CM |
| G30 | Alzheimer's disease | Diagnosis | ICD-10-CM |
| G30.0 | Alzheimer's disease with early onset | Diagnosis | ICD-10-CM |
| G30.1 | Alzheimer's disease with late onset | Diagnosis | ICD-10-CM |
| G30.8 | Other Alzheimer's disease | Diagnosis | ICD-10-CM |
| G30.9 | Alzheimer's disease, unspecified | Diagnosis | ICD-10-CM |
| G31.0 | Frontotemporal dementia | Diagnosis | ICD-10-CM |
| G31.09 | Other frontotemporal dementia | Diagnosis | ICD-10-CM |
| G31.83 | Dementia with Lewy bodies | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-----------------|---|---------------|-----------|
| Diabetes | | | |
| E08 | Diabetes mellitus due to underlying condition | Diagnosis | ICD-10-CM |
| E08.0 | Diabetes mellitus due to underlying condition with hyperosmolarity | Diagnosis | ICD-10-CM |
| E08.00 | Diabetes mellitus due to underlying condition with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC) | Diagnosis | ICD-10-CM |
| E08.01 | Diabetes mellitus due to underlying condition with hyperosmolarity with coma | Diagnosis | ICD-10-CM |
| E08.1 | Diabetes mellitus due to underlying condition with ketoacidosis | Diagnosis | ICD-10-CM |
| E08.10 | Diabetes mellitus due to underlying condition with ketoacidosis without coma | Diagnosis | ICD-10-CM |
| E08.11 | Diabetes mellitus due to underlying condition with ketoacidosis with coma | Diagnosis | ICD-10-CM |
| E08.2 | Diabetes mellitus due to underlying condition with kidney complications | Diagnosis | ICD-10-CM |
| E08.21 | Diabetes mellitus due to underlying condition with diabetic nephropathy | Diagnosis | ICD-10-CM |
| E08.22 | Diabetes mellitus due to underlying condition with diabetic chronic kidney disease | Diagnosis | ICD-10-CM |
| E08.29 | Diabetes mellitus due to underlying condition with other diabetic kidney complication | Diagnosis | ICD-10-CM |
| E08.3 | Diabetes mellitus due to underlying condition with ophthalmic complications | Diagnosis | ICD-10-CM |
| E08.31 | Diabetes mellitus due to underlying condition with unspecified diabetic retinopathy | Diagnosis | ICD-10-CM |
| E08.311 | Diabetes mellitus due to underlying condition with unspecified diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E08.319 | Diabetes mellitus due to underlying condition with unspecified diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E08.32 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E08.321 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E08.3211 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E08.3212 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E08.3213 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E08.3219 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E08.329 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E08.3291 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E08.3292 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E08.3293 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |

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| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| E08.3299 | Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E08.33 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E08.331 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E08.3311 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E08.3312 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E08.3313 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E08.3319 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E08.339 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E08.3391 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E08.3392 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E08.3393 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E08.3399 | Diabetes mellitus due to underlying condition with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E08.34 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E08.341 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E08.3411 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E08.3412 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E08.3413 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E08.3419 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E08.349 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| E08.3491 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E08.3492 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E08.3493 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E08.3499 | Diabetes mellitus due to underlying condition with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E08.35 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E08.351 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E08.3511 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E08.3512 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E08.3513 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E08.3519 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E08.352 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment involving the macula | Diagnosis | ICD-10-CM |
| E08.3521 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye | Diagnosis | ICD-10-CM |
| E08.3522 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye | Diagnosis | ICD-10-CM |
| E08.3523 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral | Diagnosis | ICD-10-CM |
| E08.3529 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye | Diagnosis | ICD-10-CM |
| E08.353 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment not involving the macula | Diagnosis | ICD-10-CM |
| E08.3531 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye | Diagnosis | ICD-10-CM |
| E08.3532 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye | Diagnosis | ICD-10-CM |
| E08.3533 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral | Diagnosis | ICD-10-CM |
| E08.3539 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| E08.354 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment | Diagnosis | ICD-10-CM |
| E08.3541 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye | Diagnosis | ICD-10-CM |
| E08.3542 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye | Diagnosis | ICD-10-CM |
| E08.3543 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral | Diagnosis | ICD-10-CM |
| E08.3549 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye | Diagnosis | ICD-10-CM |
| E08.355 | Diabetes mellitus due to underlying condition with stable proliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E08.3551 | Diabetes mellitus due to underlying condition with stable proliferative diabetic retinopathy, right eye | Diagnosis | ICD-10-CM |
| E08.3552 | Diabetes mellitus due to underlying condition with stable proliferative diabetic retinopathy, left eye | Diagnosis | ICD-10-CM |
| E08.3553 | Diabetes mellitus due to underlying condition with stable proliferative diabetic retinopathy, bilateral | Diagnosis | ICD-10-CM |
| E08.3559 | Diabetes mellitus due to underlying condition with stable proliferative diabetic retinopathy, unspecified eye | Diagnosis | ICD-10-CM |
| E08.359 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E08.3591 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E08.3592 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E08.3593 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E08.3599 | Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E08.36 | Diabetes mellitus due to underlying condition with diabetic cataract | Diagnosis | ICD-10-CM |
| E08.37 | Diabetes mellitus due to underlying condition with diabetic macular edema, resolved following treatment | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| E08.37X1 | Diabetes mellitus due to underlying condition with diabetic macular edema, resolved following treatment, right eye | Diagnosis | ICD-10-CM |
| E08.37X2 | Diabetes mellitus due to underlying condition with diabetic macular edema, resolved following treatment, left eye | Diagnosis | ICD-10-CM |
| E08.37X3 | Diabetes mellitus due to underlying condition with diabetic macular edema, resolved following treatment, bilateral | Diagnosis | ICD-10-CM |
| E08.37X9 | Diabetes mellitus due to underlying condition with diabetic macular edema, resolved following treatment, unspecified eye | Diagnosis | ICD-10-CM |
| E08.39 | Diabetes mellitus due to underlying condition with other diabetic ophthalmic complication | Diagnosis | ICD-10-CM |
| E08.4 | Diabetes mellitus due to underlying condition with neurological complications | Diagnosis | ICD-10-CM |
| E08.40 | Diabetes mellitus due to underlying condition with diabetic neuropathy, unspecified | Diagnosis | ICD-10-CM |
| E08.41 | Diabetes mellitus due to underlying condition with diabetic mononeuropathy | Diagnosis | ICD-10-CM |
| E08.42 | Diabetes mellitus due to underlying condition with diabetic polyneuropathy | Diagnosis | ICD-10-CM |
| E08.43 | Diabetes mellitus due to underlying condition with diabetic autonomic | Diagnosis | ICD-10-CM |
| E08.44 | Diabetes mellitus due to underlying condition with diabetic amyotrophy | Diagnosis | ICD-10-CM |
| E08.49 | Diabetes mellitus due to underlying condition with other diabetic neurological complication | Diagnosis | ICD-10-CM |
| E08.5 | Diabetes mellitus due to underlying condition with circulatory complications | Diagnosis | ICD-10-CM |
| E08.51 | Diabetes mellitus due to underlying condition with diabetic peripheral angiopathy without gangrene | Diagnosis | ICD-10-CM |
| E08.52 | Diabetes mellitus due to underlying condition with diabetic peripheral angiopathy with gangrene | Diagnosis | ICD-10-CM |
| E08.59 | Diabetes mellitus due to underlying condition with other circulatory complications | Diagnosis | ICD-10-CM |
| E08.6 | Diabetes mellitus due to underlying condition with other specified complications | Diagnosis | ICD-10-CM |
| E08.61 | Diabetes mellitus due to underlying condition with diabetic arthropathy | Diagnosis | ICD-10-CM |
| E08.610 | Diabetes mellitus due to underlying condition with diabetic neuropathic arthropathy | Diagnosis | ICD-10-CM |
| E08.618 | Diabetes mellitus due to underlying condition with other diabetic arthropathy | Diagnosis | ICD-10-CM |
| E08.62 | Diabetes mellitus due to underlying condition with skin complications | Diagnosis | ICD-10-CM |
| E08.620 | Diabetes mellitus due to underlying condition with diabetic dermatitis | Diagnosis | ICD-10-CM |
| E08.621 | Diabetes mellitus due to underlying condition with foot ulcer | Diagnosis | ICD-10-CM |
| E08.622 | Diabetes mellitus due to underlying condition with other skin ulcer | Diagnosis | ICD-10-CM |
| E08.628 | Diabetes mellitus due to underlying condition with other skin complications | Diagnosis | ICD-10-CM |
| E08.63 | Diabetes mellitus due to underlying condition with oral complications | Diagnosis | ICD-10-CM |
| E08.630 | Diabetes mellitus due to underlying condition with periodontal disease | Diagnosis | ICD-10-CM |
| E08.638 | Diabetes mellitus due to underlying condition with other oral complications | Diagnosis | ICD-10-CM |
| E08.64 | Diabetes mellitus due to underlying condition with hypoglycemia | Diagnosis | ICD-10-CM |
| E08.641 | Diabetes mellitus due to underlying condition with hypoglycemia with coma | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| E08.649 | Diabetes mellitus due to underlying condition with hypoglycemia without coma | Diagnosis | ICD-10-CM |
| E08.65 | Diabetes mellitus due to underlying condition with hyperglycemia | Diagnosis | ICD-10-CM |
| E08.69 | Diabetes mellitus due to underlying condition with other specified complication | Diagnosis | ICD-10-CM |
| E08.8 | Diabetes mellitus due to underlying condition with unspecified complications | Diagnosis | ICD-10-CM |
| E08.9 | Diabetes mellitus due to underlying condition without complications | Diagnosis | ICD-10-CM |
| E09 | Drug or chemical induced diabetes mellitus | Diagnosis | ICD-10-CM |
| E09.0 | Drug or chemical induced diabetes mellitus with hyperosmolarity | Diagnosis | ICD-10-CM |
| E09.00 | Drug or chemical induced diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC) | Diagnosis | ICD-10-CM |
| E09.01 | Drug or chemical induced diabetes mellitus with hyperosmolarity with coma | Diagnosis | ICD-10-CM |
| E09.1 | Drug or chemical induced diabetes mellitus with ketoacidosis | Diagnosis | ICD-10-CM |
| E09.10 | Drug or chemical induced diabetes mellitus with ketoacidosis without coma | Diagnosis | ICD-10-CM |
| E09.11 | Drug or chemical induced diabetes mellitus with ketoacidosis with coma | Diagnosis | ICD-10-CM |
| E09.2 | Drug or chemical induced diabetes mellitus with kidney complications | Diagnosis | ICD-10-CM |
| E09.21 | Drug or chemical induced diabetes mellitus with diabetic nephropathy | Diagnosis | ICD-10-CM |
| E09.22 | Drug or chemical induced diabetes mellitus with diabetic chronic kidney disease | Diagnosis | ICD-10-CM |
| E09.29 | Drug or chemical induced diabetes mellitus with other diabetic kidney complication | Diagnosis | ICD-10-CM |
| E09.3 | Drug or chemical induced diabetes mellitus with ophthalmic complications | Diagnosis | ICD-10-CM |
| E09.31 | Drug or chemical induced diabetes mellitus with unspecified diabetic retinopathy | Diagnosis | ICD-10-CM |
| E09.311 | Drug or chemical induced diabetes mellitus with unspecified diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E09.319 | Drug or chemical induced diabetes mellitus with unspecified diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E09.32 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E09.321 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E09.3211 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E09.3212 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E09.3213 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E09.3219 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E09.329 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E09.3291 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------------|---|----------------------|------------------|
| E09.3292 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E09.3293 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E09.3299 | Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E09.33 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E09.331 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E09.3311 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E09.3312 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E09.3313 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E09.3319 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E09.339 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E09.3391 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E09.3392 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E09.3393 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E09.3399 | Drug or chemical induced diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E09.34 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E09.341 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E09.3411 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E09.3412 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E09.3413 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| E09.3419 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E09.349 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E09.3491 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E09.3492 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E09.3493 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E09.3499 | Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E09.35 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E09.351 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E09.3511 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E09.3512 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E09.3513 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E09.3519 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E09.352 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula | Diagnosis | ICD-10-CM |
| E09.3521 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye | Diagnosis | ICD-10-CM |
| E09.3522 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye | Diagnosis | ICD-10-CM |
| E09.3523 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral | Diagnosis | ICD-10-CM |
| E09.3529 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye | Diagnosis | ICD-10-CM |
| E09.353 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula | Diagnosis | ICD-10-CM |
| E09.3531 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| E09.3532 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye | Diagnosis | ICD-10-CM |
| E09.3533 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral | Diagnosis | ICD-10-CM |
| E09.3539 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye | Diagnosis | ICD-10-CM |
| E09.354 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment | Diagnosis | ICD-10-CM |
| E09.3541 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right | Diagnosis | ICD-10-CM |
| E09.3542 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left | Diagnosis | ICD-10-CM |
| E09.3543 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, | Diagnosis | ICD-10-CM |
| E09.3549 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, | Diagnosis | ICD-10-CM |
| E09.355 | Drug or chemical induced diabetes mellitus with stable proliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E09.3551 | Drug or chemical induced diabetes mellitus with stable proliferative diabetic retinopathy, right eye | Diagnosis | ICD-10-CM |
| E09.3552 | Drug or chemical induced diabetes mellitus with stable proliferative diabetic retinopathy, left eye | Diagnosis | ICD-10-CM |
| E09.3553 | Drug or chemical induced diabetes mellitus with stable proliferative diabetic retinopathy, bilateral | Diagnosis | ICD-10-CM |
| E09.3559 | Drug or chemical induced diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye | Diagnosis | ICD-10-CM |
| E09.359 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E09.3591 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E09.3592 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E09.3593 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E09.3599 | Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E09.36 | Drug or chemical induced diabetes mellitus with diabetic cataract | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| E09.37 | Drug or chemical induced diabetes mellitus with diabetic macular edema, resolved following treatment | Diagnosis | ICD-10-CM |
| E09.37X1 | Drug or chemical induced diabetes mellitus with diabetic macular edema, resolved following treatment, right eye | Diagnosis | ICD-10-CM |
| E09.37X2 | Drug or chemical induced diabetes mellitus with diabetic macular edema, resolved following treatment, left eye | Diagnosis | ICD-10-CM |
| E09.37X3 | Drug or chemical induced diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral | Diagnosis | ICD-10-CM |
| E09.37X9 | Drug or chemical induced diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye | Diagnosis | ICD-10-CM |
| E09.39 | Drug or chemical induced diabetes mellitus with other diabetic ophthalmic complication | Diagnosis | ICD-10-CM |
| E09.4 | Drug or chemical induced diabetes mellitus with neurological complications | Diagnosis | ICD-10-CM |
| E09.40 | Drug or chemical induced diabetes mellitus with neurological complications with diabetic neuropathy, unspecified | Diagnosis | ICD-10-CM |
| E09.41 | Drug or chemical induced diabetes mellitus with neurological complications with diabetic mononeuropathy | Diagnosis | ICD-10-CM |
| E09.42 | Drug or chemical induced diabetes mellitus with neurological complications with diabetic polyneuropathy | Diagnosis | ICD-10-CM |
| E09.43 | Drug or chemical induced diabetes mellitus with neurological complications with diabetic autonomic (poly)neuropathy | Diagnosis | ICD-10-CM |
| E09.44 | Drug or chemical induced diabetes mellitus with neurological complications with diabetic amyotrophy | Diagnosis | ICD-10-CM |
| E09.49 | Drug or chemical induced diabetes mellitus with neurological complications with other diabetic neurological complication | Diagnosis | ICD-10-CM |
| E09.5 | Drug or chemical induced diabetes mellitus with circulatory complications | Diagnosis | ICD-10-CM |
| E09.51 | Drug or chemical induced diabetes mellitus with diabetic peripheral angiopathy without gangrene | Diagnosis | ICD-10-CM |
| E09.52 | Drug or chemical induced diabetes mellitus with diabetic peripheral angiopathy with gangrene | Diagnosis | ICD-10-CM |
| E09.59 | Drug or chemical induced diabetes mellitus with other circulatory complications | Diagnosis | ICD-10-CM |
| E09.6 | Drug or chemical induced diabetes mellitus with other specified complications | Diagnosis | ICD-10-CM |
| E09.61 | Drug or chemical induced diabetes mellitus with diabetic arthropathy | Diagnosis | ICD-10-CM |
| E09.610 | Drug or chemical induced diabetes mellitus with diabetic neuropathic arthropathy | Diagnosis | ICD-10-CM |
| E09.618 | Drug or chemical induced diabetes mellitus with other diabetic arthropathy | Diagnosis | ICD-10-CM |
| E09.62 | Drug or chemical induced diabetes mellitus with skin complications | Diagnosis | ICD-10-CM |
| E09.620 | Drug or chemical induced diabetes mellitus with diabetic dermatitis | Diagnosis | ICD-10-CM |
| E09.621 | Drug or chemical induced diabetes mellitus with foot ulcer | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| E09.622 | Drug or chemical induced diabetes mellitus with other skin ulcer | Diagnosis | ICD-10-CM |
| E09.628 | Drug or chemical induced diabetes mellitus with other skin complications | Diagnosis | ICD-10-CM |
| E09.63 | Drug or chemical induced diabetes mellitus with oral complications | Diagnosis | ICD-10-CM |
| E09.630 | Drug or chemical induced diabetes mellitus with periodontal disease | Diagnosis | ICD-10-CM |
| E09.638 | Drug or chemical induced diabetes mellitus with other oral complications | Diagnosis | ICD-10-CM |
| E09.64 | Drug or chemical induced diabetes mellitus with hypoglycemia | Diagnosis | ICD-10-CM |
| E09.641 | Drug or chemical induced diabetes mellitus with hypoglycemia with coma | Diagnosis | ICD-10-CM |
| E09.649 | Drug or chemical induced diabetes mellitus with hypoglycemia without coma | Diagnosis | ICD-10-CM |
| E09.65 | Drug or chemical induced diabetes mellitus with hyperglycemia | Diagnosis | ICD-10-CM |
| E09.69 | Drug or chemical induced diabetes mellitus with other specified complication | Diagnosis | ICD-10-CM |
| E09.8 | Drug or chemical induced diabetes mellitus with unspecified complications | Diagnosis | ICD-10-CM |
| E09.9 | Drug or chemical induced diabetes mellitus without complications | Diagnosis | ICD-10-CM |
| E10.1 | Type 1 diabetes mellitus with ketoacidosis | Diagnosis | ICD-10-CM |
| E10.10 | Type 1 diabetes mellitus with ketoacidosis without coma | Diagnosis | ICD-10-CM |
| E10.11 | Type 1 diabetes mellitus with ketoacidosis with coma | Diagnosis | ICD-10-CM |
| E10.2 | Type 1 diabetes mellitus with kidney complications | Diagnosis | ICD-10-CM |
| E10.21 | Type 1 diabetes mellitus with diabetic nephropathy | Diagnosis | ICD-10-CM |
| E10.22 | Type 1 diabetes mellitus with diabetic chronic kidney disease | Diagnosis | ICD-10-CM |
| E10.29 | Type 1 diabetes mellitus with other diabetic kidney complication | Diagnosis | ICD-10-CM |
| E10.3 | Type 1 diabetes mellitus with ophthalmic complications | Diagnosis | ICD-10-CM |
| E10.31 | Type 1 diabetes mellitus with unspecified diabetic retinopathy | Diagnosis | ICD-10-CM |
| E10.311 | Type 1 diabetes mellitus with unspecified diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E10.319 | Type 1 diabetes mellitus with unspecified diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E10.32 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E10.321 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E10.3211 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E10.3212 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E10.3213 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E10.3219 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E10.329 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E10.3291 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| E10.3292 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E10.3293 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E10.3299 | Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E10.33 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E10.331 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E10.3311 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E10.3312 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E10.3313 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E10.3319 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E10.339 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E10.3391 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E10.3392 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E10.3393 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E10.3399 | Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E10.34 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E10.341 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E10.3411 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E10.3412 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E10.3413 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| E10.3419 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E10.349 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E10.3491 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E10.3492 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E10.3493 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E10.3499 | Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E10.35 | Type 1 diabetes mellitus with proliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E10.351 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E10.3511 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E10.3512 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E10.3513 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E10.3519 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E10.352 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula | Diagnosis | ICD-10-CM |
| E10.3521 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye | Diagnosis | ICD-10-CM |
| E10.3522 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye | Diagnosis | ICD-10-CM |
| E10.3523 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral | Diagnosis | ICD-10-CM |
| E10.3529 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye | Diagnosis | ICD-10-CM |
| E10.353 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula | Diagnosis | ICD-10-CM |
| E10.3531 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| E10.3532 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye | Diagnosis | ICD-10-CM |
| E10.3533 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral | Diagnosis | ICD-10-CM |
| E10.3539 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye | Diagnosis | ICD-10-CM |
| E10.354 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment | Diagnosis | ICD-10-CM |
| E10.3541 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye | Diagnosis | ICD-10-CM |
| E10.3542 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye | Diagnosis | ICD-10-CM |
| E10.3543 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral | Diagnosis | ICD-10-CM |
| E10.3549 | Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye | Diagnosis | ICD-10-CM |
| E10.355 | Type 1 diabetes mellitus with stable proliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E10.3551 | Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, right eye | Diagnosis | ICD-10-CM |
| E10.3552 | Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, left eye | Diagnosis | ICD-10-CM |
| E10.3553 | Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, bilateral | Diagnosis | ICD-10-CM |
| E10.3559 | Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye | Diagnosis | ICD-10-CM |
| E10.359 | Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E10.3591 | Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E10.3592 | Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E10.3593 | Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E10.3599 | Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E10.36 | Type 1 diabetes mellitus with diabetic cataract | Diagnosis | ICD-10-CM |
| E10.37 | Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment | Diagnosis | ICD-10-CM |
| E10.37X1 | Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, right eye | Diagnosis | ICD-10-CM |
| E10.37X2 | Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, left eye | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| E10.37X3 | Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral | Diagnosis | ICD-10-CM |
| E10.37X9 | Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye | Diagnosis | ICD-10-CM |
| E10.39 | Type 1 diabetes mellitus with other diabetic ophthalmic complication | Diagnosis | ICD-10-CM |
| E10.4 | Type 1 diabetes mellitus with neurological complications | Diagnosis | ICD-10-CM |
| E10.40 | Type 1 diabetes mellitus with diabetic neuropathy, unspecified | Diagnosis | ICD-10-CM |
| E10.41 | Type 1 diabetes mellitus with diabetic mononeuropathy | Diagnosis | ICD-10-CM |
| E10.42 | Type 1 diabetes mellitus with diabetic polyneuropathy | Diagnosis | ICD-10-CM |
| E10.43 | Type 1 diabetes mellitus with diabetic autonomic (poly)neuropathy | Diagnosis | ICD-10-CM |
| E10.44 | Type 1 diabetes mellitus with diabetic amyotrophy | Diagnosis | ICD-10-CM |
| E10.49 | Type 1 diabetes mellitus with other diabetic neurological complication | Diagnosis | ICD-10-CM |
| E10.5 | Type 1 diabetes mellitus with circulatory complications | Diagnosis | ICD-10-CM |
| E10.51 | Type 1 diabetes mellitus with diabetic peripheral angiopathy without gangrene | Diagnosis | ICD-10-CM |
| E10.52 | Type 1 diabetes mellitus with diabetic peripheral angiopathy with gangrene | Diagnosis | ICD-10-CM |
| E10.59 | Type 1 diabetes mellitus with other circulatory complications | Diagnosis | ICD-10-CM |
| E10.6 | Type 1 diabetes mellitus with other specified complications | Diagnosis | ICD-10-CM |
| E10.61 | Type 1 diabetes mellitus with diabetic arthropathy | Diagnosis | ICD-10-CM |
| E10.610 | Type 1 diabetes mellitus with diabetic neuropathic arthropathy | Diagnosis | ICD-10-CM |
| E10.618 | Type 1 diabetes mellitus with other diabetic arthropathy | Diagnosis | ICD-10-CM |
| E10.62 | Type 1 diabetes mellitus with skin complications | Diagnosis | ICD-10-CM |
| E10.620 | Type 1 diabetes mellitus with diabetic dermatitis | Diagnosis | ICD-10-CM |
| E10.621 | Type 1 diabetes mellitus with foot ulcer | Diagnosis | ICD-10-CM |
| E10.622 | Type 1 diabetes mellitus with other skin ulcer | Diagnosis | ICD-10-CM |
| E10.628 | Type 1 diabetes mellitus with other skin complications | Diagnosis | ICD-10-CM |
| E10.63 | Type 1 diabetes mellitus with oral complications | Diagnosis | ICD-10-CM |
| E10.630 | Type 1 diabetes mellitus with periodontal disease | Diagnosis | ICD-10-CM |
| E10.638 | Type 1 diabetes mellitus with other oral complications | Diagnosis | ICD-10-CM |
| E10.64 | Type 1 diabetes mellitus with hypoglycemia | Diagnosis | ICD-10-CM |
| E10.641 | Type 1 diabetes mellitus with hypoglycemia with coma | Diagnosis | ICD-10-CM |
| E10.649 | Type 1 diabetes mellitus with hypoglycemia without coma | Diagnosis | ICD-10-CM |
| E10.65 | Type 1 diabetes mellitus with hyperglycemia | Diagnosis | ICD-10-CM |
| E10.69 | Type 1 diabetes mellitus with other specified complication | Diagnosis | ICD-10-CM |
| E10.8 | Type 1 diabetes mellitus with unspecified complications | Diagnosis | ICD-10-CM |
| E10.9 | Type 1 diabetes mellitus without complications | Diagnosis | ICD-10-CM |
| E11.0 | Type 2 diabetes mellitus with hyperosmolarity | Diagnosis | ICD-10-CM |
| E11.00 | Type 2 diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC) | Diagnosis | ICD-10-CM |
| E11.01 | Type 2 diabetes mellitus with hyperosmolarity with coma | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| E11.1 | Type 2 diabetes mellitus with ketoacidosis | Diagnosis | ICD-10-CM |
| E11.10 | Type 2 diabetes mellitus with ketoacidosis without coma | Diagnosis | ICD-10-CM |
| E11.11 | Type 2 diabetes mellitus with ketoacidosis with coma | Diagnosis | ICD-10-CM |
| E11.2 | Type 2 diabetes mellitus with kidney complications | Diagnosis | ICD-10-CM |
| E11.21 | Type 2 diabetes mellitus with diabetic nephropathy | Diagnosis | ICD-10-CM |
| E11.22 | Type 2 diabetes mellitus with diabetic chronic kidney disease | Diagnosis | ICD-10-CM |
| E11.29 | Type 2 diabetes mellitus with other diabetic kidney complication | Diagnosis | ICD-10-CM |
| E11.3 | Type 2 diabetes mellitus with ophthalmic complications | Diagnosis | ICD-10-CM |
| E11.31 | Type 2 diabetes mellitus with unspecified diabetic retinopathy | Diagnosis | ICD-10-CM |
| E11.311 | Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E11.319 | Type 2 diabetes mellitus with unspecified diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E11.32 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E11.321 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E11.3211 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E11.3212 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E11.3213 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E11.3219 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E11.329 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E11.3291 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E11.3292 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E11.3293 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E11.3299 | Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E11.33 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E11.331 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E11.3311 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| E11.3312 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E11.3313 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E11.3319 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E11.339 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E11.3391 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E11.3392 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E11.3393 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E11.3399 | Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E11.34 | Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E11.341 | Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E11.3411 | Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E11.3412 | Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E11.3413 | Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E11.3419 | Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E11.349 | Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E11.3491 | Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E11.3492 | Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E11.3493 | Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| E11.3499 | Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without | Diagnosis | ICD-10-CM |
| E11.35 | Type 2 diabetes mellitus with proliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E11.351 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E11.3511 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E11.3512 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E11.3513 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E11.3519 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E11.352 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula | Diagnosis | ICD-10-CM |
| E11.3521 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye | Diagnosis | ICD-10-CM |
| E11.3522 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye | Diagnosis | ICD-10-CM |
| E11.3523 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral | Diagnosis | ICD-10-CM |
| E11.3529 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye | Diagnosis | ICD-10-CM |
| E11.353 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula | Diagnosis | ICD-10-CM |
| E11.3531 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye | Diagnosis | ICD-10-CM |
| E11.3532 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye | Diagnosis | ICD-10-CM |
| E11.3533 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral | Diagnosis | ICD-10-CM |
| E11.3539 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye | Diagnosis | ICD-10-CM |
| E11.354 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment | Diagnosis | ICD-10-CM |
| E11.3541 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye | Diagnosis | ICD-10-CM |
| E11.3542 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| E11.3543 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral | Diagnosis | ICD-10-CM |
| E11.3549 | Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye | Diagnosis | ICD-10-CM |
| E11.355 | Type 2 diabetes mellitus with stable proliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E11.3551 | Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, right eye | Diagnosis | ICD-10-CM |
| E11.3552 | Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, left eye | Diagnosis | ICD-10-CM |
| E11.3553 | Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, bilateral | Diagnosis | ICD-10-CM |
| E11.3559 | Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye | Diagnosis | ICD-10-CM |
| E11.359 | Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E11.3591 | Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E11.3592 | Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E11.3593 | Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E11.3599 | Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E11.36 | Type 2 diabetes mellitus with diabetic cataract | Diagnosis | ICD-10-CM |
| E11.37 | Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment | Diagnosis | ICD-10-CM |
| E11.37X1 | Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, right eye | Diagnosis | ICD-10-CM |
| E11.37X2 | Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, left eye | Diagnosis | ICD-10-CM |
| E11.37X3 | Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral | Diagnosis | ICD-10-CM |
| E11.37X9 | Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye | Diagnosis | ICD-10-CM |
| E11.39 | Type 2 diabetes mellitus with other diabetic ophthalmic complication | Diagnosis | ICD-10-CM |
| E11.4 | Type 2 diabetes mellitus with neurological complications | Diagnosis | ICD-10-CM |
| E11.40 | Type 2 diabetes mellitus with diabetic neuropathy, unspecified | Diagnosis | ICD-10-CM |
| E11.41 | Type 2 diabetes mellitus with diabetic mononeuropathy | Diagnosis | ICD-10-CM |
| E11.42 | Type 2 diabetes mellitus with diabetic polyneuropathy | Diagnosis | ICD-10-CM |
| E11.43 | Type 2 diabetes mellitus with diabetic autonomic (poly)neuropathy | Diagnosis | ICD-10-CM |
| E11.44 | Type 2 diabetes mellitus with diabetic amyotrophy | Diagnosis | ICD-10-CM |
| E11.49 | Type 2 diabetes mellitus with other diabetic neurological complication | Diagnosis | ICD-10-CM |
| E11.5 | Type 2 diabetes mellitus with circulatory complications | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| E11.51 | Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene | Diagnosis | ICD-10-CM |
| E11.52 | Type 2 diabetes mellitus with diabetic peripheral angiopathy with gangrene | Diagnosis | ICD-10-CM |
| E11.59 | Type 2 diabetes mellitus with other circulatory complications | Diagnosis | ICD-10-CM |
| E11.6 | Type 2 diabetes mellitus with other specified complications | Diagnosis | ICD-10-CM |
| E11.61 | Type 2 diabetes mellitus with diabetic arthropathy | Diagnosis | ICD-10-CM |
| E11.610 | Type 2 diabetes mellitus with diabetic neuropathic arthropathy | Diagnosis | ICD-10-CM |
| E11.618 | Type 2 diabetes mellitus with other diabetic arthropathy | Diagnosis | ICD-10-CM |
| E11.62 | Type 2 diabetes mellitus with skin complications | Diagnosis | ICD-10-CM |
| E11.620 | Type 2 diabetes mellitus with diabetic dermatitis | Diagnosis | ICD-10-CM |
| E11.621 | Type 2 diabetes mellitus with foot ulcer | Diagnosis | ICD-10-CM |
| E11.622 | Type 2 diabetes mellitus with other skin ulcer | Diagnosis | ICD-10-CM |
| E11.628 | Type 2 diabetes mellitus with other skin complications | Diagnosis | ICD-10-CM |
| E11.63 | Type 2 diabetes mellitus with oral complications | Diagnosis | ICD-10-CM |
| E11.630 | Type 2 diabetes mellitus with periodontal disease | Diagnosis | ICD-10-CM |
| E11.638 | Type 2 diabetes mellitus with other oral complications | Diagnosis | ICD-10-CM |
| E11.64 | Type 2 diabetes mellitus with hypoglycemia | Diagnosis | ICD-10-CM |
| E11.641 | Type 2 diabetes mellitus with hypoglycemia with coma | Diagnosis | ICD-10-CM |
| E11.649 | Type 2 diabetes mellitus with hypoglycemia without coma | Diagnosis | ICD-10-CM |
| E11.65 | Type 2 diabetes mellitus with hyperglycemia | Diagnosis | ICD-10-CM |
| E11.69 | Type 2 diabetes mellitus with other specified complication | Diagnosis | ICD-10-CM |
| E11.8 | Type 2 diabetes mellitus with unspecified complications | Diagnosis | ICD-10-CM |
| E11.9 | Type 2 diabetes mellitus without complications | Diagnosis | ICD-10-CM |
| E13.0 | Other specified diabetes mellitus with hyperosmolarity | Diagnosis | ICD-10-CM |
| E13.00 | Other specified diabetes mellitus with hyperosmolarity without nonketotic | Diagnosis | ICD-10-CM |
| E13.01 | Other specified diabetes mellitus with hyperosmolarity with coma | Diagnosis | ICD-10-CM |
| E13.1 | Other specified diabetes mellitus with ketoacidosis | Diagnosis | ICD-10-CM |
| E13.10 | Other specified diabetes mellitus with ketoacidosis without coma | Diagnosis | ICD-10-CM |
| E13.11 | Other specified diabetes mellitus with ketoacidosis with coma | Diagnosis | ICD-10-CM |
| E13.2 | Other specified diabetes mellitus with kidney complications | Diagnosis | ICD-10-CM |
| E13.21 | Other specified diabetes mellitus with diabetic nephropathy | Diagnosis | ICD-10-CM |
| E13.22 | Other specified diabetes mellitus with diabetic chronic kidney disease | Diagnosis | ICD-10-CM |
| E13.29 | Other specified diabetes mellitus with other diabetic kidney complication | Diagnosis | ICD-10-CM |
| E13.3 | Other specified diabetes mellitus with ophthalmic complications | Diagnosis | ICD-10-CM |
| E13.31 | Other specified diabetes mellitus with unspecified diabetic retinopathy | Diagnosis | ICD-10-CM |
| E13.311 | Other specified diabetes mellitus with unspecified diabetic retinopathy with macular | Diagnosis | ICD-10-CM |
| E13.319 | Other specified diabetes mellitus with unspecified diabetic retinopathy without | Diagnosis | ICD-10-CM |
| E13.32 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| E13.321 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E13.3211 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E13.3212 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E13.3213 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E13.3219 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E13.329 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E13.3291 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E13.3292 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E13.3293 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E13.3299 | Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E13.33 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E13.331 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E13.3311 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E13.3312 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E13.3313 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E13.3319 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E13.339 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E13.3391 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E13.3392 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------------|--|----------------------|------------------|
| E13.3393 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E13.3399 | Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E13.34 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E13.341 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E13.3411 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E13.3412 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E13.3413 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E13.3419 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E13.349 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E13.3491 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E13.3492 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E13.3493 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E13.3499 | Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E13.35 | Other specified diabetes mellitus with proliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E13.351 | Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema | Diagnosis | ICD-10-CM |
| E13.3511 | Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye | Diagnosis | ICD-10-CM |
| E13.3512 | Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye | Diagnosis | ICD-10-CM |
| E13.3513 | Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral | Diagnosis | ICD-10-CM |
| E13.3519 | Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| E13.352 | Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula | Diagnosis | ICD-10-CM |
| E13.3521 | Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye | Diagnosis | ICD-10-CM |
| E13.3522 | Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye | Diagnosis | ICD-10-CM |
| E13.3523 | Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral | Diagnosis | ICD-10-CM |
| E13.3529 | Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye | Diagnosis | ICD-10-CM |
| E13.353 | Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula | Diagnosis | ICD-10-CM |
| E13.3531 | Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye | Diagnosis | ICD-10-CM |
| E13.3532 | Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye | Diagnosis | ICD-10-CM |
| E13.3533 | Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral | Diagnosis | ICD-10-CM |
| E13.3539 | Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye | Diagnosis | ICD-10-CM |
| E13.354 | Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment | Diagnosis | ICD-10-CM |
| E13.3541 | Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right | Diagnosis | ICD-10-CM |
| E13.3542 | Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left | Diagnosis | ICD-10-CM |
| E13.3543 | Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, | Diagnosis | ICD-10-CM |
| E13.3549 | Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, | Diagnosis | ICD-10-CM |
| E13.355 | Other specified diabetes mellitus with stable proliferative diabetic retinopathy | Diagnosis | ICD-10-CM |
| E13.3551 | Other specified diabetes mellitus with stable proliferative diabetic retinopathy, right eye | Diagnosis | ICD-10-CM |
| E13.3552 | Other specified diabetes mellitus with stable proliferative diabetic retinopathy, left eye | Diagnosis | ICD-10-CM |
| E13.3553 | Other specified diabetes mellitus with stable proliferative diabetic retinopathy, bilateral | Diagnosis | ICD-10-CM |
| E13.3559 | Other specified diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| E13.359 | Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema | Diagnosis | ICD-10-CM |
| E13.3591 | Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye | Diagnosis | ICD-10-CM |
| E13.3592 | Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye | Diagnosis | ICD-10-CM |
| E13.3593 | Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral | Diagnosis | ICD-10-CM |
| E13.3599 | Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye | Diagnosis | ICD-10-CM |
| E13.36 | Other specified diabetes mellitus with diabetic cataract | Diagnosis | ICD-10-CM |
| E13.37 | Other specified diabetes mellitus with diabetic macular edema, resolved following treatment | Diagnosis | ICD-10-CM |
| E13.37X1 | Other specified diabetes mellitus with diabetic macular edema, resolved following treatment, right eye | Diagnosis | ICD-10-CM |
| E13.37X2 | Other specified diabetes mellitus with diabetic macular edema, resolved following treatment, left eye | Diagnosis | ICD-10-CM |
| E13.37X3 | Other specified diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral | Diagnosis | ICD-10-CM |
| E13.37X9 | Other specified diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye | Diagnosis | ICD-10-CM |
| E13.39 | Other specified diabetes mellitus with other diabetic ophthalmic complication | Diagnosis | ICD-10-CM |
| E13.4 | Other specified diabetes mellitus with neurological complications | Diagnosis | ICD-10-CM |
| E13.40 | Other specified diabetes mellitus with diabetic neuropathy, unspecified | Diagnosis | ICD-10-CM |
| E13.41 | Other specified diabetes mellitus with diabetic mononeuropathy | Diagnosis | ICD-10-CM |
| E13.42 | Other specified diabetes mellitus with diabetic polyneuropathy | Diagnosis | ICD-10-CM |
| E13.43 | Other specified diabetes mellitus with diabetic autonomic (poly)neuropathy | Diagnosis | ICD-10-CM |
| E13.44 | Other specified diabetes mellitus with diabetic amyotrophy | Diagnosis | ICD-10-CM |
| E13.49 | Other specified diabetes mellitus with other diabetic neurological complication | Diagnosis | ICD-10-CM |
| E13.5 | Other specified diabetes mellitus with circulatory complications | Diagnosis | ICD-10-CM |
| E13.51 | Other specified diabetes mellitus with diabetic peripheral angiopathy without | Diagnosis | ICD-10-CM |
| E13.52 | Other specified diabetes mellitus with diabetic peripheral angiopathy with gangrene | Diagnosis | ICD-10-CM |
| E13.59 | Other specified diabetes mellitus with other circulatory complications | Diagnosis | ICD-10-CM |
| E13.6 | Other specified diabetes mellitus with other specified complications | Diagnosis | ICD-10-CM |
| E13.61 | Other specified diabetes mellitus with diabetic arthropathy | Diagnosis | ICD-10-CM |
| E13.610 | Other specified diabetes mellitus with diabetic neuropathic arthropathy | Diagnosis | ICD-10-CM |
| E13.618 | Other specified diabetes mellitus with other diabetic arthropathy | Diagnosis | ICD-10-CM |
| E13.62 | Other specified diabetes mellitus with skin complications | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| E13.620 | Other specified diabetes mellitus with diabetic dermatitis | Diagnosis | ICD-10-CM |
| E13.621 | Other specified diabetes mellitus with foot ulcer | Diagnosis | ICD-10-CM |
| E13.622 | Other specified diabetes mellitus with other skin ulcer | Diagnosis | ICD-10-CM |
| E13.628 | Other specified diabetes mellitus with other skin complications | Diagnosis | ICD-10-CM |
| E13.63 | Other specified diabetes mellitus with oral complications | Diagnosis | ICD-10-CM |
| E13.630 | Other specified diabetes mellitus with periodontal disease | Diagnosis | ICD-10-CM |
| E13.638 | Other specified diabetes mellitus with other oral complications | Diagnosis | ICD-10-CM |
| E13.64 | Other specified diabetes mellitus with hypoglycemia | Diagnosis | ICD-10-CM |
| E13.641 | Other specified diabetes mellitus with hypoglycemia with coma | Diagnosis | ICD-10-CM |
| E13.649 | Other specified diabetes mellitus with hypoglycemia without coma | Diagnosis | ICD-10-CM |
| E13.65 | Other specified diabetes mellitus with hyperglycemia | Diagnosis | ICD-10-CM |
| E13.69 | Other specified diabetes mellitus with other specified complication | Diagnosis | ICD-10-CM |
| E13.8 | Other specified diabetes mellitus with unspecified complications | Diagnosis | ICD-10-CM |
| E13.9 | Other specified diabetes mellitus without complications | Diagnosis | ICD-10-CM |
| O24.0 | Pre-existing type 1 diabetes mellitus, in pregnancy, childbirth and the puerperium | Diagnosis | ICD-10-CM |
| O24.01 | Pre-existing type 1 diabetes mellitus, in pregnancy | Diagnosis | ICD-10-CM |
| O24.011 | Pre-existing type 1 diabetes mellitus, in pregnancy, first trimester | Diagnosis | ICD-10-CM |
| O24.012 | Pre-existing type 1 diabetes mellitus, in pregnancy, second trimester | Diagnosis | ICD-10-CM |
| O24.013 | Pre-existing type 1 diabetes mellitus, in pregnancy, third trimester | Diagnosis | ICD-10-CM |
| O24.019 | Pre-existing type 1 diabetes mellitus, in pregnancy, unspecified trimester | Diagnosis | ICD-10-CM |
| O24.02 | Pre-existing type 1 diabetes mellitus, in childbirth | Diagnosis | ICD-10-CM |
| O24.03 | Pre-existing type 1 diabetes mellitus, in the puerperium | Diagnosis | ICD-10-CM |
| O24.1 | Pre-existing type 2 diabetes mellitus, in pregnancy, childbirth and the puerperium | Diagnosis | ICD-10-CM |
| O24.11 | Pre-existing type 2 diabetes mellitus, in pregnancy | Diagnosis | ICD-10-CM |
| O24.111 | Pre-existing type 2 diabetes mellitus, in pregnancy, first trimester | Diagnosis | ICD-10-CM |
| O24.112 | Pre-existing type 2 diabetes mellitus, in pregnancy, second trimester | Diagnosis | ICD-10-CM |
| O24.113 | Pre-existing type 2 diabetes mellitus, in pregnancy, third trimester | Diagnosis | ICD-10-CM |
| O24.119 | Pre-existing type 2 diabetes mellitus, in pregnancy, unspecified trimester | Diagnosis | ICD-10-CM |
| O24.12 | Pre-existing type 2 diabetes mellitus, in childbirth | Diagnosis | ICD-10-CM |
| O24.13 | Pre-existing type 2 diabetes mellitus, in the puerperium | Diagnosis | ICD-10-CM |
| O24.3 | Unspecified pre-existing diabetes mellitus in pregnancy, childbirth and the puerperium | Diagnosis | ICD-10-CM |
| O24.31 | Unspecified pre-existing diabetes mellitus in pregnancy | Diagnosis | ICD-10-CM |
| O24.311 | Unspecified pre-existing diabetes mellitus in pregnancy, first trimester | Diagnosis | ICD-10-CM |
| O24.312 | Unspecified pre-existing diabetes mellitus in pregnancy, second trimester | Diagnosis | ICD-10-CM |
| O24.313 | Unspecified pre-existing diabetes mellitus in pregnancy, third trimester | Diagnosis | ICD-10-CM |
| O24.319 | Unspecified pre-existing diabetes mellitus in pregnancy, unspecified trimester | Diagnosis | ICD-10-CM |
| O24.32 | Unspecified pre-existing diabetes mellitus in childbirth | Diagnosis | ICD-10-CM |
| O24.33 | Unspecified pre-existing diabetes mellitus in the puerperium | Diagnosis | ICD-10-CM |
| O24.41 | Gestational diabetes mellitus in pregnancy | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------------------|--|---------------|-----------|
| O24.410 | Gestational diabetes mellitus in pregnancy, diet controlled | Diagnosis | ICD-10-CM |
| O24.414 | Gestational diabetes mellitus in pregnancy, insulin controlled | Diagnosis | ICD-10-CM |
| O24.415 | Gestational diabetes mellitus in pregnancy, controlled by oral hypoglycemic drugs | Diagnosis | ICD-10-CM |
| O24.419 | Gestational diabetes mellitus in pregnancy, unspecified control | Diagnosis | ICD-10-CM |
| O24.42 | Gestational diabetes mellitus in childbirth | Diagnosis | ICD-10-CM |
| O24.420 | Gestational diabetes mellitus in childbirth, diet controlled | Diagnosis | ICD-10-CM |
| O24.424 | Gestational diabetes mellitus in childbirth, insulin controlled | Diagnosis | ICD-10-CM |
| O24.425 | Gestational diabetes mellitus in childbirth, controlled by oral hypoglycemic drugs | Diagnosis | ICD-10-CM |
| O24.429 | Gestational diabetes mellitus in childbirth, unspecified control | Diagnosis | ICD-10-CM |
| O24.43 | Gestational diabetes mellitus in the puerperium | Diagnosis | ICD-10-CM |
| O24.430 | Gestational diabetes mellitus in the puerperium, diet controlled | Diagnosis | ICD-10-CM |
| O24.434 | Gestational diabetes mellitus in the puerperium, insulin controlled | Diagnosis | ICD-10-CM |
| O24.435 | Gestational diabetes mellitus in puerperium, controlled by oral hypoglycemic drugs | Diagnosis | ICD-10-CM |
| O24.439 | Gestational diabetes mellitus in the puerperium, unspecified control | Diagnosis | ICD-10-CM |
| O24.811 | Other pre-existing diabetes mellitus in pregnancy, first trimester | Diagnosis | ICD-10-CM |
| O24.812 | Other pre-existing diabetes mellitus in pregnancy, second trimester | Diagnosis | ICD-10-CM |
| O24.813 | Other pre-existing diabetes mellitus in pregnancy, third trimester | Diagnosis | ICD-10-CM |
| O24.819 | Other pre-existing diabetes mellitus in pregnancy, unspecified trimester | Diagnosis | ICD-10-CM |
| O24.82 | Other pre-existing diabetes mellitus in childbirth | Diagnosis | ICD-10-CM |
| O24.83 | Other pre-existing diabetes mellitus in the puerperium | Diagnosis | ICD-10-CM |
| O24.9 | Unspecified diabetes mellitus in pregnancy, childbirth and the puerperium | Diagnosis | ICD-10-CM |
| O24.91 | Unspecified diabetes mellitus in pregnancy | Diagnosis | ICD-10-CM |
| O24.911 | Unspecified diabetes mellitus in pregnancy, first trimester | Diagnosis | ICD-10-CM |
| O24.912 | Unspecified diabetes mellitus in pregnancy, second trimester | Diagnosis | ICD-10-CM |
| O24.913 | Unspecified diabetes mellitus in pregnancy, third trimester | Diagnosis | ICD-10-CM |
| O24.919 | Unspecified diabetes mellitus in pregnancy, unspecified trimester | Diagnosis | ICD-10-CM |
| O24.92 | Unspecified diabetes mellitus in childbirth | Diagnosis | ICD-10-CM |
| O24.93 | Unspecified diabetes mellitus in the puerperium | Diagnosis | ICD-10-CM |
| Hepatitis B | | | |
| B16.1 | Acute hepatitis B with delta-agent without hepatic coma | Diagnosis | ICD-10-CM |
| B16.2 | Acute hepatitis B without delta-agent with hepatic coma | Diagnosis | ICD-10-CM |
| B16.9 | Acute hepatitis B without delta-agent and without hepatic coma | Diagnosis | ICD-10-CM |
| B18.0 | Chronic viral hepatitis B with delta-agent | Diagnosis | ICD-10-CM |
| B18.1 | Chronic viral hepatitis B without delta-agent | Diagnosis | ICD-10-CM |
| B19.1 | Unspecified viral hepatitis B | Diagnosis | ICD-10-CM |
| B19.10 | Unspecified viral hepatitis B without hepatic coma | Diagnosis | ICD-10-CM |
| B19.11 | Unspecified viral hepatitis B with hepatic coma | Diagnosis | ICD-10-CM |
| Z22.51 | Carrier of viral hepatitis B | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---|--|---------------|-----------|
| Hepatitis C | | | |
| B17.1 | Acute hepatitis C | Diagnosis | ICD-10-CM |
| B17.10 | Acute hepatitis C without hepatic coma | Diagnosis | ICD-10-CM |
| B17.11 | Acute hepatitis C with hepatic coma | Diagnosis | ICD-10-CM |
| B18.2 | Chronic viral hepatitis C | Diagnosis | ICD-10-CM |
| B19.2 | Unspecified viral hepatitis C | Diagnosis | ICD-10-CM |
| B19.20 | Unspecified viral hepatitis C without hepatic coma | Diagnosis | ICD-10-CM |
| B19.21 | Unspecified viral hepatitis C with hepatic coma | Diagnosis | ICD-10-CM |
| O98.4 | Viral hepatitis complicating pregnancy, childbirth and the puerperium | Diagnosis | ICD-10-CM |
| O98.41 | Viral hepatitis complicating pregnancy | Diagnosis | ICD-10-CM |
| O98.411 | Viral hepatitis complicating pregnancy, first trimester | Diagnosis | ICD-10-CM |
| O98.412 | Viral hepatitis complicating pregnancy, second trimester | Diagnosis | ICD-10-CM |
| O98.413 | Viral hepatitis complicating pregnancy, third trimester | Diagnosis | ICD-10-CM |
| O98.419 | Viral hepatitis complicating pregnancy, unspecified trimester | Diagnosis | ICD-10-CM |
| O98.42 | Viral hepatitis complicating childbirth | Diagnosis | ICD-10-CM |
| O98.43 | Viral hepatitis complicating the puerperium | Diagnosis | ICD-10-CM |
| Z22.52 | Carrier of viral hepatitis C | Diagnosis | ICD-10-CM |
| Human Immunodeficiency Virus (HIV) | | | |
| B20 | Human immunodeficiency virus [HIV] disease | Diagnosis | ICD-10-CM |
| B97.35 | Human immunodeficiency virus, type 2 [HIV 2] as the cause of diseases classified elsewhere | Diagnosis | ICD-10-CM |
| O98.7 | Human immunodeficiency virus [HIV] disease complicating pregnancy, childbirth and the puerperium | Diagnosis | ICD-10-CM |
| O98.71 | Human immunodeficiency virus [HIV] disease complicating pregnancy | Diagnosis | ICD-10-CM |
| O98.711 | Human immunodeficiency virus [HIV] disease complicating pregnancy, first trimester | Diagnosis | ICD-10-CM |
| O98.712 | Human immunodeficiency virus [HIV] disease complicating pregnancy, second | Diagnosis | ICD-10-CM |
| O98.713 | Human immunodeficiency virus [HIV] disease complicating pregnancy, third trimester | Diagnosis | ICD-10-CM |
| O98.719 | Human immunodeficiency virus [HIV] disease complicating pregnancy, unspecified | Diagnosis | ICD-10-CM |
| O98.72 | Human immunodeficiency virus [HIV] disease complicating childbirth | Diagnosis | ICD-10-CM |
| O98.73 | Human immunodeficiency virus [HIV] disease complicating the puerperium | Diagnosis | ICD-10-CM |
| Z21 | Asymptomatic human immunodeficiency virus [HIV] infection status | Diagnosis | ICD-10-CM |
| Hypertension | | | |
| H35.031 | Hypertensive retinopathy, right eye | Diagnosis | ICD-10-CM |
| H35.032 | Hypertensive retinopathy, left eye | Diagnosis | ICD-10-CM |
| H35.033 | Hypertensive retinopathy, bilateral | Diagnosis | ICD-10-CM |
| H35.039 | Hypertensive retinopathy, unspecified eye | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---|---|---------------|------------|
| I10 | Essential (primary) hypertension | Diagnosis | ICD-10-CM |
| I11.0 | Hypertensive heart disease with heart failure | Diagnosis | ICD-10-CM |
| I11.9 | Hypertensive heart disease without heart failure | Diagnosis | ICD-10-CM |
| I12.0 | Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease | Diagnosis | ICD-10-CM |
| I12.9 | Hypertensive chronic kidney disease with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease | Diagnosis | ICD-10-CM |
| 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 | Diagnosis | ICD-10-CM |
| I13.1 | Hypertensive heart and chronic kidney disease without heart failure | Diagnosis | ICD-10-CM |
| 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 | Diagnosis | ICD-10-CM |
| I13.11 | Hypertensive heart and chronic kidney disease without heart failure, with stage 5 chronic kidney disease, or end stage renal disease | Diagnosis | ICD-10-CM |
| I13.2 | Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease | Diagnosis | ICD-10-CM |
| I15.0 | Renovascular hypertension | Diagnosis | ICD-10-CM |
| I15.1 | Hypertension secondary to other renal disorders | Diagnosis | ICD-10-CM |
| I15.2 | Hypertension secondary to endocrine disorders | Diagnosis | ICD-10-CM |
| I15.8 | Other secondary hypertension | Diagnosis | ICD-10-CM |
| I15.9 | Secondary hypertension, unspecified | Diagnosis | ICD-10-CM |
| I16.0 | Hypertensive urgency | Diagnosis | ICD-10-CM |
| I16.1 | Hypertensive emergency | Diagnosis | ICD-10-CM |
| I16.9 | Hypertensive crisis, unspecified | Diagnosis | ICD-10-CM |
| I67.4 | Hypertensive encephalopathy | Diagnosis | ICD-10-CM |
| N26.2 | Page kidney | Diagnosis | ICD-10-CM |
| Immunosuppressant Disease or Treatment | | | |
| 02Y | Heart and Great Vessels, Transplantation | Procedure | ICD-10-PCS |
| 02YA | Transplantation / Heart | Procedure | ICD-10-PCS |
| 02YA0Z0 | Transplantation of Heart, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 02YA0Z1 | Transplantation of Heart, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 02YA0Z2 | Transplantation of Heart, Zooplasic, Open Approach | Procedure | ICD-10-PCS |
| 07Y | Lymphatic and Hemic Systems, Transplantation | Procedure | ICD-10-PCS |
| 07YP | Transplantation / Spleen | Procedure | ICD-10-PCS |
| 07YP0Z0 | Transplantation of Spleen, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 07YP0Z1 | Transplantation of Spleen, Syngeneic, Open Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| 07YPOZ2 | Transplantation of Spleen, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0BY | Respiratory System, Transplantation | Procedure | ICD-10-PCS |
| 0BYC | Transplantation / Upper Lung Lobe, Right | Procedure | ICD-10-PCS |
| 0BYCOZ0 | Transplantation of Right Upper Lung Lobe, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYCOZ1 | Transplantation of Right Upper Lung Lobe, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYCOZ2 | Transplantation of Right Upper Lung Lobe, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0BYD | Transplantation / Middle Lung Lobe, Right | Procedure | ICD-10-PCS |
| 0BYDOZ0 | Transplantation of Right Middle Lung Lobe, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYDOZ1 | Transplantation of Right Middle Lung Lobe, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYDOZ2 | Transplantation of Right Middle Lung Lobe, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0BYF | Transplantation / Lower Lung Lobe, Right | Procedure | ICD-10-PCS |
| 0BYFOZ0 | Transplantation of Right Lower Lung Lobe, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYFOZ1 | Transplantation of Right Lower Lung Lobe, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYFOZ2 | Transplantation of Right Lower Lung Lobe, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0BYG | Transplantation / Upper Lung Lobe, Left | Procedure | ICD-10-PCS |
| 0BYGOZ0 | Transplantation of Left Upper Lung Lobe, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYGOZ1 | Transplantation of Left Upper Lung Lobe, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYGOZ2 | Transplantation of Left Upper Lung Lobe, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0BYH | Transplantation / Lung Lingula | Procedure | ICD-10-PCS |
| 0BYHOZ0 | Transplantation of Lung Lingula, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYHOZ1 | Transplantation of Lung Lingula, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYHOZ2 | Transplantation of Lung Lingula, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0BYJ | Transplantation / Lower Lung Lobe, Left | Procedure | ICD-10-PCS |
| 0BYJOZ0 | Transplantation of Left Lower Lung Lobe, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYJOZ1 | Transplantation of Left Lower Lung Lobe, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYJOZ2 | Transplantation of Left Lower Lung Lobe, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0BYK | Transplantation / Lung, Right | Procedure | ICD-10-PCS |
| 0BYKOZ0 | Transplantation of Right Lung, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYKOZ1 | Transplantation of Right Lung, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYKOZ2 | Transplantation of Right Lung, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0BYL | Transplantation / Lung, Left | Procedure | ICD-10-PCS |
| 0BYLOZ0 | Transplantation of Left Lung, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYLOZ1 | Transplantation of Left Lung, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYLOZ2 | Transplantation of Left Lung, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0BYM | Transplantation / Lungs, Bilateral | Procedure | ICD-10-PCS |
| 0BYMOZ0 | Transplantation of Bilateral Lungs, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYMOZ1 | Transplantation of Bilateral Lungs, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYMOZ2 | Transplantation of Bilateral Lungs, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0DY | Gastrointestinal System, Transplantation | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| ODY5 | Transplantation / Esophagus | Procedure | ICD-10-PCS |
| ODY50Z0 | Transplantation of Esophagus, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| ODY50Z1 | Transplantation of Esophagus, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| ODY50Z2 | Transplantation of Esophagus, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| ODY6 | Transplantation / Stomach | Procedure | ICD-10-PCS |
| ODY60Z0 | Transplantation of Stomach, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| ODY60Z1 | Transplantation of Stomach, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| ODY60Z2 | Transplantation of Stomach, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| ODY8 | Transplantation / Small Intestine | Procedure | ICD-10-PCS |
| ODY80Z0 | Transplantation of Small Intestine, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| ODY80Z1 | Transplantation of Small Intestine, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| ODY80Z2 | Transplantation of Small Intestine, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| ODYE | Transplantation / Large Intestine | Procedure | ICD-10-PCS |
| ODYE0Z0 | Transplantation of Large Intestine, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| ODYE0Z1 | Transplantation of Large Intestine, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| ODYE0Z2 | Transplantation of Large Intestine, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| OFY | Hepatobiliary System and Pancreas, Transplantation | Procedure | ICD-10-PCS |
| OFY0 | Transplantation / Liver | Procedure | ICD-10-PCS |
| OFY00Z0 | Transplantation of Liver, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| OFY00Z1 | Transplantation of Liver, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| OFY00Z2 | Transplantation of Liver, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| OFYG | Transplantation / Pancreas | Procedure | ICD-10-PCS |
| OFYG0Z0 | Transplantation of Pancreas, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| OFYG0Z1 | Transplantation of Pancreas, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| OFYG0Z2 | Transplantation of Pancreas, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| OTY | Urinary System, Transplantation | Procedure | ICD-10-PCS |
| OTY0 | Transplantation / Kidney, Right | Procedure | ICD-10-PCS |
| OTY00Z0 | Transplantation of Right Kidney, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| OTY00Z1 | Transplantation of Right Kidney, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| OTY00Z2 | Transplantation of Right Kidney, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| OTY1 | Transplantation / Kidney, Left | Procedure | ICD-10-PCS |
| OTY10Z0 | Transplantation of Left Kidney, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| OTY10Z1 | Transplantation of Left Kidney, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| OTY10Z2 | Transplantation of Left Kidney, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 30230AZ | Transfusion of Embryonic Stem Cells into Peripheral Vein, Open Approach | Procedure | ICD-10-PCS |
| 30230G1 | Transfusion of Nonautologous Bone Marrow into Peripheral Vein, Open Approach | Procedure | ICD-10-PCS |
| 30230G2 | Transfusion of Allogeneic Related Bone Marrow into Peripheral Vein, Open Approach | Procedure | ICD-10-PCS |
| 30230G3 | Transfusion of Allogeneic Unrelated Bone Marrow into Peripheral Vein, Open Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| 30230G4 | Transfusion of Allogeneic Unspecified Bone Marrow into Peripheral Vein, Open Approach | Procedure | ICD-10-PCS |
| 30230X1 | Transfusion of Nonautologous Cord Blood Stem Cells into Peripheral Vein, Open Approach | Procedure | ICD-10-PCS |
| 30230X2 | Transfusion of Allogeneic Related Cord Blood Stem Cells into Peripheral Vein, Open Approach | Procedure | ICD-10-PCS |
| 30230X3 | Transfusion of Allogeneic Unrelated Cord Blood Stem Cells into Peripheral Vein, Open Approach | Procedure | ICD-10-PCS |
| 30230X4 | Transfusion of Allogeneic Unspecified Cord Blood Stem Cells into Peripheral Vein, Open Approach | Procedure | ICD-10-PCS |
| 30230Y1 | Transfusion of Nonautologous Hematopoietic Stem Cells into Peripheral Vein, Open Approach | Procedure | ICD-10-PCS |
| 30230Y2 | Transfusion of Allogeneic Related Hematopoietic Stem Cells into Peripheral Vein, Open Approach | Procedure | ICD-10-PCS |
| 30230Y3 | Transfusion of Allogeneic Unrelated Hematopoietic Stem Cells into Peripheral Vein, Open Approach | Procedure | ICD-10-PCS |
| 30230Y4 | Transfusion of Allogeneic Unspecified Hematopoietic Stem Cells into Peripheral Vein, Open Approach | Procedure | ICD-10-PCS |
| 30233AZ | Transfusion of Embryonic Stem Cells into Peripheral Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30233G1 | Transfusion of Nonautologous Bone Marrow into Peripheral Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30233G2 | Transfusion of Allogeneic Related Bone Marrow into Peripheral Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30233G3 | Transfusion of Allogeneic Unrelated Bone Marrow into Peripheral Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30233G4 | Transfusion of Allogeneic Unspecified Bone Marrow into Peripheral Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30233X1 | Transfusion of Nonautologous Cord Blood Stem Cells into Peripheral Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30233X2 | Transfusion of Allogeneic Related Cord Blood Stem Cells into Peripheral Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30233X3 | Transfusion of Allogeneic Unrelated Cord Blood Stem Cells into Peripheral Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30233X4 | Transfusion of Allogeneic Unspecified Cord Blood Stem Cells into Peripheral Vein, Percutaneous Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| 30233Y1 | Transfusion of Nonautologous Hematopoietic Stem Cells into Peripheral Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30233Y2 | Transfusion of Allogeneic Related Hematopoietic Stem Cells into Peripheral Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30233Y3 | Transfusion of Allogeneic Unrelated Hematopoietic Stem Cells into Peripheral Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30233Y4 | Transfusion of Allogeneic Unspecified Hematopoietic Stem Cells into Peripheral Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30240AZ | Transfusion of Embryonic Stem Cells into Central Vein, Open Approach | Procedure | ICD-10-PCS |
| 30240G1 | Transfusion of Nonautologous Bone Marrow into Central Vein, Open Approach | Procedure | ICD-10-PCS |
| 30240G2 | Transfusion of Allogeneic Related Bone Marrow into Central Vein, Open Approach | Procedure | ICD-10-PCS |
| 30240G3 | Transfusion of Allogeneic Unrelated Bone Marrow into Central Vein, Open Approach | Procedure | ICD-10-PCS |
| 30240G4 | Transfusion of Allogeneic Unspecified Bone Marrow into Central Vein, Open Approach | Procedure | ICD-10-PCS |
| 30240X1 | Transfusion of Nonautologous Cord Blood Stem Cells into Central Vein, Open Approach | Procedure | ICD-10-PCS |
| 30240X2 | Transfusion of Allogeneic Related Cord Blood Stem Cells into Central Vein, Open Approach | Procedure | ICD-10-PCS |
| 30240X3 | Transfusion of Allogeneic Unrelated Cord Blood Stem Cells into Central Vein, Open Approach | Procedure | ICD-10-PCS |
| 30240X4 | Transfusion of Allogeneic Unspecified Cord Blood Stem Cells into Central Vein, Open Approach | Procedure | ICD-10-PCS |
| 30240Y0 | Transfusion of Autologous Hematopoietic Stem Cells into Central Vein, Open Approach | Procedure | ICD-10-PCS |
| 30240Y1 | Transfusion of Nonautologous Hematopoietic Stem Cells into Central Vein, Open Approach | Procedure | ICD-10-PCS |
| 30240Y2 | Transfusion of Allogeneic Related Hematopoietic Stem Cells into Central Vein, Open Approach | Procedure | ICD-10-PCS |
| 30240Y3 | Transfusion of Allogeneic Unrelated Hematopoietic Stem Cells into Central Vein, Open Approach | Procedure | ICD-10-PCS |
| 30240Y4 | Transfusion of Allogeneic Unspecified Hematopoietic Stem Cells into Central Vein, Open Approach | Procedure | ICD-10-PCS |
| 30243AZ | Transfusion of Embryonic Stem Cells into Central Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30243G1 | Transfusion of Nonautologous Bone Marrow into Central Vein, Percutaneous Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| 30243G2 | Transfusion of Allogeneic Related Bone Marrow into Central Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30243G3 | Transfusion of Allogeneic Unrelated Bone Marrow into Central Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30243G4 | Transfusion of Allogeneic Unspecified Bone Marrow into Central Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30243X1 | Transfusion of Nonautologous Cord Blood Stem Cells into Central Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30243X2 | Transfusion of Allogeneic Related Cord Blood Stem Cells into Central Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30243X3 | Transfusion of Allogeneic Unrelated Cord Blood Stem Cells into Central Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30243X4 | Transfusion of Allogeneic Unspecified Cord Blood Stem Cells into Central Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30243Y1 | Transfusion of Nonautologous Hematopoietic Stem Cells into Central Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30243Y2 | Transfusion of Allogeneic Related Hematopoietic Stem Cells into Central Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30243Y3 | Transfusion of Allogeneic Unrelated Hematopoietic Stem Cells into Central Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30243Y4 | Transfusion of Allogeneic Unspecified Hematopoietic Stem Cells into Central Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30250G1 | Transfusion of Nonautologous Bone Marrow into Peripheral Artery, Open Approach | Procedure | ICD-10-PCS |
| 30250X1 | Transfusion of Nonautologous Cord Blood Stem Cells into Peripheral Artery, Open Approach | Procedure | ICD-10-PCS |
| 30250Y1 | Transfusion of Nonautologous Hematopoietic Stem Cells into Peripheral Artery, Open Approach | Procedure | ICD-10-PCS |
| 30253G1 | Transfusion of Nonautologous Bone Marrow into Peripheral Artery, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30253X1 | Transfusion of Nonautologous Cord Blood Stem Cells into Peripheral Artery, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30253Y1 | Transfusion of Nonautologous Hematopoietic Stem Cells into Peripheral Artery, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30260G1 | Transfusion of Nonautologous Bone Marrow into Central Artery, Open Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| 30260X1 | Transfusion of Nonautologous Cord Blood Stem Cells into Central Artery, Open Approach | Procedure | ICD-10-PCS |
| 30260Y1 | Transfusion of Nonautologous Hematopoietic Stem Cells into Central Artery, Open Approach | Procedure | ICD-10-PCS |
| 30263G1 | Transfusion of Nonautologous Bone Marrow into Central Artery, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30263X1 | Transfusion of Nonautologous Cord Blood Stem Cells into Central Artery, Percutaneous Approach | Procedure | ICD-10-PCS |
| 30263Y1 | Transfusion of Nonautologous Hematopoietic Stem Cells into Central Artery, Percutaneous Approach | Procedure | ICD-10-PCS |
| 32851 | Lung transplant, single; without cardiopulmonary bypass | Procedure | CPT-4 |
| 32852 | Lung transplant, single; with cardiopulmonary bypass | Procedure | CPT-4 |
| 32853 | Lung transplant, double (bilateral sequential or en bloc); without cardiopulmonary bypass | Procedure | CPT-4 |
| 32854 | Lung transplant, double (bilateral sequential or en bloc); with cardiopulmonary bypass | Procedure | CPT-4 |
| 33935 | Heart-lung transplant with recipient cardiectomy-pneumonectomy | Procedure | CPT-4 |
| 33945 | Heart transplant, with or without recipient cardiectomy | Procedure | CPT-4 |
| 3490F | History of AIDS-defining condition (HIV) | Procedure | CPT-2 |
| 38240 | Hematopoietic progenitor cell (HPC); allogeneic transplantation per donor | Procedure | CPT-4 |
| 38242 | Allogeneic lymphocyte infusions | Procedure | CPT-4 |
| 38243 | Hematopoietic progenitor cell (HPC); HPC boost | Procedure | CPT-4 |
| 3E00X05 | Introduction of Other Antineoplastic into Skin and Mucous Membranes, External Approach | Procedure | ICD-10-PCS |
| 3E00X0M | Introduction of Monoclonal Antibody into Skin and Mucous Membranes, External Approach | Procedure | ICD-10-PCS |
| 3E01305 | Introduction of Other Antineoplastic into Subcutaneous Tissue, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0130M | Introduction of Monoclonal Antibody into Subcutaneous Tissue, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E02305 | Introduction of Other Antineoplastic into Muscle, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0230M | Introduction of Monoclonal Antibody into Muscle, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E03002 | Introduction of High-dose Interleukin-2 into Peripheral Vein, Open Approach | Procedure | ICD-10-PCS |
| 3E03003 | Introduction of Low-dose Interleukin-2 into Peripheral Vein, Open Approach | Procedure | ICD-10-PCS |
| 3E03005 | Introduction of Other Antineoplastic into Peripheral Vein, Open Approach | Procedure | ICD-10-PCS |
| 3E0300M | Introduction of Monoclonal Antibody into Peripheral Vein, Open Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| 3E0300P | Introduction of Clofarabine into Peripheral Vein, Open Approach | Procedure | ICD-10-PCS |
| 3E030WL | Introduction of Immunosuppressive into Peripheral Vein, Open | Procedure | ICD-10-PCS |
| 3E03302 | Introduction of High-dose Interleukin-2 into Peripheral Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E03303 | Introduction of Low-dose Interleukin-2 into Peripheral Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E03305 | Introduction of Other Antineoplastic into Peripheral Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0330M | Introduction of Monoclonal Antibody into Peripheral Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0330P | Introduction of Clofarabine into Peripheral Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E033WL | Introduction of Immunosuppressive into Peripheral Vein, Percutaneous | Procedure | ICD-10-PCS |
| 3E04002 | Introduction of High-dose Interleukin-2 into Central Vein, Open Approach | Procedure | ICD-10-PCS |
| 3E04003 | Introduction of Low-dose Interleukin-2 into Central Vein, Open Approach | Procedure | ICD-10-PCS |
| 3E04005 | Introduction of Other Antineoplastic into Central Vein, Open Approach | Procedure | ICD-10-PCS |
| 3E0400M | Introduction of Monoclonal Antibody into Central Vein, Open Approach | Procedure | ICD-10-PCS |
| 3E0400P | Introduction of Clofarabine into Central Vein, Open Approach | Procedure | ICD-10-PCS |
| 3E040WL | Introduction of Immunosuppressive into Central Vein, Open | Procedure | ICD-10-PCS |
| 3E04302 | Introduction of High-dose Interleukin-2 into Central Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E04303 | Introduction of Low-dose Interleukin-2 into Central Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E04305 | Introduction of Other Antineoplastic into Central Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0430M | Introduction of Monoclonal Antibody into Central Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0430P | Introduction of Clofarabine into Central Vein, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E043WL | Introduction of Immunosuppressive into Central Vein, Percutaneous | Procedure | ICD-10-PCS |
| 3E05002 | Introduction of High-dose Interleukin-2 into Peripheral Artery, Open Approach | Procedure | ICD-10-PCS |
| 3E05003 | Introduction of Low-dose Interleukin-2 into Peripheral Artery, Open Approach | Procedure | ICD-10-PCS |
| 3E05005 | Introduction of Other Antineoplastic into Peripheral Artery, Open Approach | Procedure | ICD-10-PCS |
| 3E0500M | Introduction of Monoclonal Antibody into Peripheral Artery, Open Approach | Procedure | ICD-10-PCS |
| 3E0500P | Introduction of Clofarabine into Peripheral Artery, Open Approach | Procedure | ICD-10-PCS |
| 3E050WL | Introduction of Immunosuppressive into Peripheral Artery, Open | Procedure | ICD-10-PCS |
| 3E05302 | Introduction of High-dose Interleukin-2 into Peripheral Artery, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E05303 | Introduction of Low-dose Interleukin-2 into Peripheral Artery, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E05305 | Introduction of Other Antineoplastic into Peripheral Artery, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0530M | Introduction of Monoclonal Antibody into Peripheral Artery, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0530P | Introduction of Clofarabine into Peripheral Artery, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E053WL | Introduction of Immunosuppressive into Peripheral Artery, Percutaneous | Procedure | ICD-10-PCS |
| 3E06002 | Introduction of High-dose Interleukin-2 into Central Artery, Open Approach | Procedure | ICD-10-PCS |
| 3E06003 | Introduction of Low-dose Interleukin-2 into Central Artery, Open Approach | Procedure | ICD-10-PCS |
| 3E06005 | Introduction of Other Antineoplastic into Central Artery, Open Approach | Procedure | ICD-10-PCS |
| 3E0600M | Introduction of Monoclonal Antibody into Central Artery, Open Approach | Procedure | ICD-10-PCS |
| 3E0600P | Introduction of Clofarabine into Central Artery, Open Approach | Procedure | ICD-10-PCS |
| 3E060WL | Introduction of Immunosuppressive into Central Artery, Open | Procedure | ICD-10-PCS |
| 3E06302 | Introduction of High-dose Interleukin-2 into Central Artery, Percutaneous Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| 3E06303 | Introduction of Low-dose Interleukin-2 into Central Artery, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E06305 | Introduction of Other Antineoplastic into Central Artery, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0630M | Introduction of Monoclonal Antibody into Central Artery, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0630P | Introduction of Clofarabine into Central Artery, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E063WL | Introduction of Immunosuppressive into Central Artery, Percutaneous | Procedure | ICD-10-PCS |
| 3E09305 | Introduction of Other Antineoplastic into Nose, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0930M | Introduction of Monoclonal Antibody into Nose, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E09705 | Introduction of Other Antineoplastic into Nose, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0970M | Introduction of Monoclonal Antibody into Nose, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E09X05 | Introduction of Other Antineoplastic into Nose, External Approach | Procedure | ICD-10-PCS |
| 3E09X0M | Introduction of Monoclonal Antibody into Nose, External Approach | Procedure | ICD-10-PCS |
| 3E0A305 | Introduction of Other Antineoplastic into Bone Marrow, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0A30M | Introduction of Monoclonal Antibody into Bone Marrow, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0B305 | Introduction of Other Antineoplastic into Ear, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0B30M | Introduction of Monoclonal Antibody into Ear, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0B705 | Introduction of Other Antineoplastic into Ear, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0B70M | Introduction of Monoclonal Antibody into Ear, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0BX05 | Introduction of Other Antineoplastic into Ear, External Approach | Procedure | ICD-10-PCS |
| 3E0BX0M | Introduction of Monoclonal Antibody into Ear, External Approach | Procedure | ICD-10-PCS |
| 3E0C305 | Introduction of Other Antineoplastic into Eye, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0C30M | Introduction of Monoclonal Antibody into Eye, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0C705 | Introduction of Other Antineoplastic into Eye, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0C70M | Introduction of Monoclonal Antibody into Eye, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0CX05 | Introduction of Other Antineoplastic into Eye, External Approach | Procedure | ICD-10-PCS |
| 3E0CX0M | Introduction of Monoclonal Antibody into Eye, External Approach | Procedure | ICD-10-PCS |
| 3E0D305 | Introduction of Other Antineoplastic into Mouth and Pharynx, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0D30M | Introduction of Monoclonal Antibody into Mouth and Pharynx, Percutaneous | Procedure | ICD-10-PCS |
| 3E0D705 | Introduction of Other Antineoplastic into Mouth and Pharynx, Via Natural or Artificial | Procedure | ICD-10-PCS |
| 3E0D70M | Introduction of Monoclonal Antibody into Mouth and Pharynx, Via Natural or Artificial | Procedure | ICD-10-PCS |
| 3E0DX05 | Introduction of Other Antineoplastic into Mouth and Pharynx, External Approach | Procedure | ICD-10-PCS |
| 3E0DX0M | Introduction of Monoclonal Antibody into Mouth and Pharynx, External Approach | Procedure | ICD-10-PCS |
| 3E0E305 | Introduction of Other Antineoplastic into Products of Conception, Percutaneous | Procedure | ICD-10-PCS |
| 3E0E30M | Introduction of Monoclonal Antibody into Products of Conception, Percutaneous | Procedure | ICD-10-PCS |
| 3E0E705 | Introduction of Other Antineoplastic into Products of Conception, Via Natural or | Procedure | ICD-10-PCS |
| 3E0E70M | Introduction of Monoclonal Antibody into Products of Conception, Via Natural or | Procedure | ICD-10-PCS |
| 3E0E805 | Introduction of Other Antineoplastic into Products of Conception, Via Natural or | Procedure | ICD-10-PCS |
| 3E0E80M | Introduction of Monoclonal Antibody into Products of Conception, Via Natural or | Procedure | ICD-10-PCS |
| 3E0F305 | Introduction of Other Antineoplastic into Respiratory Tract, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0F30M | Introduction of Monoclonal Antibody into Respiratory Tract, Percutaneous Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| 3E0F705 | Introduction of Other Antineoplastic into Respiratory Tract, Via Natural or Artificial | Procedure | ICD-10-PCS |
| 3E0F70M | Introduction of Monoclonal Antibody into Respiratory Tract, Via Natural or Artificial | Procedure | ICD-10-PCS |
| 3E0F805 | Introduction of Other Antineoplastic into Respiratory Tract, Via Natural or Artificial | Procedure | ICD-10-PCS |
| 3E0F80M | Introduction of Monoclonal Antibody into Respiratory Tract, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 3E0G305 | Introduction of Other Antineoplastic into Upper GI, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0G30M | Introduction of Monoclonal Antibody into Upper GI, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0G705 | Introduction of Other Antineoplastic into Upper GI, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0G70M | Introduction of Monoclonal Antibody into Upper GI, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0G805 | Introduction of Other Antineoplastic into Upper GI, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 3E0G80M | Introduction of Monoclonal Antibody into Upper GI, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 3E0H305 | Introduction of Other Antineoplastic into Lower GI, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0H30M | Introduction of Monoclonal Antibody into Lower GI, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0H705 | Introduction of Other Antineoplastic into Lower GI, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0H70M | Introduction of Monoclonal Antibody into Lower GI, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0H805 | Introduction of Other Antineoplastic into Lower GI, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 3E0H80M | Introduction of Monoclonal Antibody into Lower GI, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 3E0J305 | Introduction of Other Antineoplastic into Biliary and Pancreatic Tract, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0J30M | Introduction of Monoclonal Antibody into Biliary and Pancreatic Tract, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0J705 | Introduction of Other Antineoplastic into Biliary and Pancreatic Tract, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0J70M | Introduction of Monoclonal Antibody into Biliary and Pancreatic Tract, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0J805 | Introduction of Other Antineoplastic into Biliary and Pancreatic Tract, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 3E0J80M | Introduction of Monoclonal Antibody into Biliary and Pancreatic Tract, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 3E0K305 | Introduction of Other Antineoplastic into Genitourinary Tract, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0K30M | Introduction of Monoclonal Antibody into Genitourinary Tract, Percutaneous Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| 3E0K705 | Introduction of Other Antineoplastic into Genitourinary Tract, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0K70M | Introduction of Monoclonal Antibody into Genitourinary Tract, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0K805 | Introduction of Other Antineoplastic into Genitourinary Tract, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 3E0K80M | Introduction of Monoclonal Antibody into Genitourinary Tract, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 3E0L305 | Introduction of Other Antineoplastic into Pleural Cavity, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0L30M | Introduction of Monoclonal Antibody into Pleural Cavity, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0L705 | Introduction of Other Antineoplastic into Pleural Cavity, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0L70M | Introduction of Monoclonal Antibody into Pleural Cavity, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0M305 | Introduction of Other Antineoplastic into Peritoneal Cavity, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0M30M | Introduction of Monoclonal Antibody into Peritoneal Cavity, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0M705 | Introduction of Other Antineoplastic into Peritoneal Cavity, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0M70M | Introduction of Monoclonal Antibody into Peritoneal Cavity, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0N305 | Introduction of Other Antineoplastic into Male Reproductive, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0N30M | Introduction of Monoclonal Antibody into Male Reproductive, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0N705 | Introduction of Other Antineoplastic into Male Reproductive, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0N70M | Introduction of Monoclonal Antibody into Male Reproductive, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0N805 | Introduction of Other Antineoplastic into Male Reproductive, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 3E0N80M | Introduction of Monoclonal Antibody into Male Reproductive, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 3E0P305 | Introduction of Other Antineoplastic into Female Reproductive, Percutaneous Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| 3E0P30M | Introduction of Monoclonal Antibody into Female Reproductive, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0P705 | Introduction of Other Antineoplastic into Female Reproductive, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0P70M | Introduction of Monoclonal Antibody into Female Reproductive, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0P805 | Introduction of Other Antineoplastic into Female Reproductive, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 3E0P80M | Introduction of Monoclonal Antibody into Female Reproductive, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 3E0Q005 | Introduction of Other Antineoplastic into Cranial Cavity and Brain, Open Approach | Procedure | ICD-10-PCS |
| 3E0Q00M | Introduction of Monoclonal Antibody into Cranial Cavity and Brain, Open Approach | Procedure | ICD-10-PCS |
| 3E0Q305 | Introduction of Other Antineoplastic into Cranial Cavity and Brain, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0Q30M | Introduction of Monoclonal Antibody into Cranial Cavity and Brain, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0Q705 | Introduction of Other Antineoplastic into Cranial Cavity and Brain, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0Q70M | Introduction of Monoclonal Antibody into Cranial Cavity and Brain, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0R302 | Introduction of High-dose Interleukin-2 into Spinal Canal, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0R303 | Introduction of Low-dose Interleukin-2 into Spinal Canal, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0R305 | Introduction of Other Antineoplastic into Spinal Canal, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0R30M | Introduction of Monoclonal Antibody into Spinal Canal, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0S302 | Introduction of High-dose Interleukin-2 into Epidural Space, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0S303 | Introduction of Low-dose Interleukin-2 into Epidural Space, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0S305 | Introduction of Other Antineoplastic into Epidural Space, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0S30M | Introduction of Monoclonal Antibody into Epidural Space, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0U305 | Introduction of Other Antineoplastic into Joints, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0U30M | Introduction of Monoclonal Antibody into Joints, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0V305 | Introduction of Other Antineoplastic into Bones, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0V30M | Introduction of Monoclonal Antibody into Bones, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0W305 | Introduction of Other Antineoplastic into Lymphatics, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0W30M | Introduction of Monoclonal Antibody into Lymphatics, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0Y305 | Introduction of Other Antineoplastic into Pericardial Cavity, Percutaneous Approach | Procedure | ICD-10-PCS |
| 3E0Y30M | Introduction of Monoclonal Antibody into Pericardial Cavity, Percutaneous Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| 3E0Y705 | Introduction of Other Antineoplastic into Pericardial Cavity, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E0Y70M | Introduction of Monoclonal Antibody into Pericardial Cavity, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 3E1M39Z | Irrigation of Peritoneal Cavity using Dialysate, Percutaneous Approach | Procedure | ICD-10-PCS |
| 4153F | Combination peginterferon and ribavirin therapy prescribed (HEP-C) | Procedure | CPT-2 |
| 44135 | Intestinal allotransplantation; from cadaver donor | Procedure | CPT-4 |
| 44136 | Intestinal allotransplantation; from living donor | Procedure | CPT-4 |
| 47135 | Liver allotransplantation, orthotopic, partial or whole, from cadaver or living donor, any age | Procedure | CPT-4 |
| 47136 | Liver allotransplantation; heterotopic, partial or whole, from cadaver or living donor, any age | Procedure | CPT-4 |
| 48554 | Transplantation of pancreatic allograft | Procedure | CPT-4 |
| 50360 | Renal allotransplantation, implantation of graft; without recipient nephrectomy | Procedure | CPT-4 |
| 50365 | Renal allotransplantation, implantation of graft; with recipient nephrectomy | Procedure | CPT-4 |
| 50366 | Renal Homotransplantation, Implantation Of Graft | Procedure | CPT-4 |
| 50370 | Removal of transplanted renal allograft | Procedure | CPT-4 |
| 5A1D00Z | Performance of Urinary Filtration, Single | Procedure | ICD-10-PCS |
| 5A1D60Z | Performance of Urinary Filtration, Multiple | Procedure | ICD-10-PCS |
| 5A1D70Z | Performance of Urinary Filtration, Intermittent, Less than 6 Hours Per Day | Procedure | ICD-10-PCS |
| 5A1D80Z | Performance of Urinary Filtration, Prolonged Intermittent, 6-18 hours Per Day | Procedure | ICD-10-PCS |
| 5A1D90Z | Performance of Urinary Filtration, Continuous, Greater than 18 hours Per Day | Procedure | ICD-10-PCS |
| 90378 | Respiratory syncytial virus, monoclonal antibody, recombinant, for intramuscular use, 50 mg, each | Procedure | CPT-4 |
| 96401 | Chemotherapy administration, subcutaneous or intramuscular; non-hormonal anti-neoplastic | Procedure | CPT-4 |
| 96402 | Chemotherapy administration, subcutaneous or intramuscular; hormonal anti-neoplastic | Procedure | CPT-4 |
| 96409 | Chemotherapy administration; intravenous, push technique, single or initial substance/drug | Procedure | CPT-4 |
| 96411 | Chemotherapy administration; intravenous, push technique, each additional substance/drug (List separately in addition to code for primary procedure) | Procedure | CPT-4 |
| 96413 | Chemotherapy administration, intravenous infusion technique; up to 1 hour, single or initial substance/drug | Procedure | CPT-4 |
| 96415 | Chemotherapy administration, intravenous infusion technique; each additional hour (List separately in addition to code for primary procedure) | Procedure | CPT-4 |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------|---|---------------|-----------|
| 96416 | Chemotherapy administration, intravenous infusion technique; initiation of prolonged chemotherapy infusion (more than 8 hours), requiring use of a portable or implantable pump | Procedure | CPT-4 |
| 96417 | Chemotherapy administration, intravenous infusion technique; each additional sequential infusion (different substance/drug), up to 1 hour (List separately in addition to code for primary procedure) | Procedure | CPT-4 |
| 96420 | Chemotherapy administration, intra-arterial; push technique | Procedure | CPT-4 |
| 96422 | Chemotherapy administration, intra-arterial; infusion technique, up to 1 hour | Procedure | CPT-4 |
| 96423 | Chemotherapy administration, intra-arterial; infusion technique, each additional hour (List separately in addition to code for primary procedure) | Procedure | CPT-4 |
| 96425 | Chemotherapy administration, intra-arterial; infusion technique, initiation of prolonged infusion (more than 8 hours), requiring the use of a portable or implantable pump | Procedure | CPT-4 |
| 96440 | Chemotherapy administration into pleural cavity, requiring and including thoracentesis | Procedure | CPT-4 |
| 96446 | Chemotherapy administration into the peritoneal cavity via indwelling port or catheter | Procedure | CPT-4 |
| 96450 | Chemotherapy administration, into CNS (eg, intrathecal), requiring and including spinal puncture | Procedure | CPT-4 |
| 96542 | Chemotherapy injection, subarachnoid or intraventricular via subcutaneous reservoir, single or multiple agents | Procedure | CPT-4 |
| 96549 | Unlisted chemotherapy procedure | Procedure | CPT-4 |
| A4653 | Peritoneal dialysis catheter anchoring device, belt, each | Procedure | HCPCS |
| A4671 | Disposable cyclor set used with cyclor dialysis machine, each | Procedure | HCPCS |
| A4672 | Drainage extension line, sterile, for dialysis, each | Procedure | HCPCS |
| A4673 | Extension line with easy lock connectors, used with dialysis | Procedure | HCPCS |
| A4674 | Chemicals/antiseptics solution used to clean/sterilize dialysis equipment, per 8 oz | Procedure | HCPCS |
| A4680 | Activated carbon filter for hemodialysis, each | Procedure | HCPCS |
| A4690 | Dialyzer (artificial kidneys), all types, all sizes, for hemodialysis, each | Procedure | HCPCS |
| A4700 | Standard dialysate solution, each | Procedure | HCPCS |
| A4705 | Bicarbonate dialysate solution, each | Procedure | HCPCS |
| A4706 | Bicarbonate concentrate, solution, for hemodialysis, per gallon | Procedure | HCPCS |
| A4707 | Bicarbonate concentrate, powder, for hemodialysis, per packet | Procedure | HCPCS |
| A4708 | Acetate concentrate solution, for hemodialysis, per gallon | Procedure | HCPCS |
| A4709 | Acid concentrate, solution, for hemodialysis, per gallon | Procedure | HCPCS |
| A4712 | Water, sterile, for injection, per 10 ml | Procedure | HCPCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------|---|---------------|-----------|
| A4714 | Treated water (deionized, distilled, or reverse osmosis) for peritoneal dialysis, per gallon | Procedure | HCPCS |
| A4719 | "Y set" tubing for peritoneal dialysis | Procedure | HCPCS |
| A4720 | Dialysate solution, any concentration of dextrose, fluid volume greater than 249 cc, but less than or equal to 999 cc, for peritoneal dialysis | Procedure | HCPCS |
| A4721 | Dialysate solution, any concentration of dextrose, fluid volume greater than 999 cc but less than or equal to 1999 cc, for peritoneal dialysis | Procedure | HCPCS |
| A4722 | Dialysate solution, any concentration of dextrose, fluid volume greater than 1999 cc but less than or equal to 2999 cc, for peritoneal dialysis | Procedure | HCPCS |
| A4723 | Dialysate solution, any concentration of dextrose, fluid volume greater than 2999 cc but less than or equal to 3999 cc, for peritoneal dialysis | Procedure | HCPCS |
| A4724 | Dialysate solution, any concentration of dextrose, fluid volume greater than 3999 cc but less than or equal to 4999 cc, for peritoneal dialysis | Procedure | HCPCS |
| A4725 | Dialysate solution, any concentration of dextrose, fluid volume greater than 4999 cc but less than or equal to 5999 cc, for peritoneal dialysis | Procedure | HCPCS |
| A4726 | Dialysate solution, any concentration of dextrose, fluid volume greater than 5999 cc, for peritoneal dialysis | Procedure | HCPCS |
| A4728 | Dialysate solution, nondextrose containing, 500 ml | Procedure | HCPCS |
| A4730 | Fistula cannulation set for hemodialysis, each | Procedure | HCPCS |
| A4735 | Local/topical anesthetics for dialysis only | Procedure | HCPCS |
| A4736 | Topical anesthetic, for dialysis, per g | Procedure | HCPCS |
| A4737 | Injectable anesthetic, for dialysis, per 10 ml | Procedure | HCPCS |
| A4740 | Shunt accessory, for hemodialysis, any type, each | Procedure | HCPCS |
| A4750 | Blood tubing, arterial or venous, for hemodialysis, each | Procedure | HCPCS |
| A4755 | Blood tubing, arterial and venous combined, for hemodialysis, each | Procedure | HCPCS |
| A4760 | Dialysate solution test kit, for peritoneal dialysis, any type, each | Procedure | HCPCS |
| A4765 | Dialysate concentrate, powder, additive for peritoneal dialysis, per packet | Procedure | HCPCS |
| A4766 | Dialysate concentrate, solution, additive for peritoneal dialysis, per 10 ml | Procedure | HCPCS |
| A4802 | Protamine sulfate, for hemodialysis, per 50 mg | Procedure | HCPCS |
| A4820 | Hemodialysis kit supplies | Procedure | HCPCS |
| A4850 | Hemostats with rubber tips for dialysis | Procedure | HCPCS |
| A4860 | Disposable catheter tips for peritoneal dialysis, per 10 | Procedure | HCPCS |
| A4870 | Plumbing and/or electrical work for home hemodialysis equipment | Procedure | HCPCS |
| A4880 | Storage tanks utilized in connection with water purification system, replacement tanks for dialysis | Procedure | HCPCS |
| A4890 | Contracts, repair and maintenance, for hemodialysis equipment | Procedure | HCPCS |
| A4900 | Continuous ambulatory peritoneal dialysis (capd) supply kit | Procedure | HCPCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| A4901 | Continuous cycling peritoneal dialysis (ccpd) supply kit | Procedure | HCPCS |
| A4905 | Intermittent peritoneal dialysis (ipd) supply kit | Procedure | HCPCS |
| A4910 | Non-medical supplies for dialysis, (i.e., scale, scissors, stopwatch, etc.) | Procedure | HCPCS |
| A4911 | Drain bag/bottle, for dialysis, each | Procedure | HCPCS |
| A4912 | Gomco drain bottle | Procedure | HCPCS |
| A4913 | Miscellaneous dialysis supplies, not otherwise specified | Procedure | HCPCS |
| A4914 | Preparation kits | Procedure | HCPCS |
| A4918 | Venous pressure clamp, for hemodialysis, each | Procedure | HCPCS |
| A9545 | Iodine I-131 tositumomab, therapeutic, per treatment dose | Procedure | HCPCS |
| B18.0 | Chronic viral hepatitis B with delta-agent | Diagnosis | ICD-10-CM |
| B18.1 | Chronic viral hepatitis B without delta-agent | Diagnosis | ICD-10-CM |
| B18.2 | Chronic viral hepatitis C | Diagnosis | ICD-10-CM |
| B18.9 | Chronic viral hepatitis, unspecified | Diagnosis | ICD-10-CM |
| B20 | Human immunodeficiency virus [HIV] disease | Diagnosis | ICD-10-CM |
| B59 | Pneumocystosis | Diagnosis | ICD-10-CM |
| B97.35 | Human immunodeficiency virus, type 2 [HIV 2] as the cause of diseases classified elsewhere | Diagnosis | ICD-10-CM |
| BT29 | Computerized Tomography (CT Scan) / Kidney Transplant | Procedure | ICD-10-PCS |
| BT2900Z | Computerized Tomography (CT Scan) of Kidney Transplant using High Osmolar Contrast, Unenhanced and Enhanced | Procedure | ICD-10-PCS |
| BT290ZZ | Computerized Tomography (CT Scan) of Kidney Transplant using High Osmolar Contrast | Procedure | ICD-10-PCS |
| BT2910Z | Computerized Tomography (CT Scan) of Kidney Transplant using Low Osmolar Contrast, Unenhanced and Enhanced | Procedure | ICD-10-PCS |
| BT291ZZ | Computerized Tomography (CT Scan) of Kidney Transplant using Low Osmolar Contrast | Procedure | ICD-10-PCS |
| BT29Y0Z | Computerized Tomography (CT Scan) of Kidney Transplant using Other Contrast, Unenhanced and Enhanced | Procedure | ICD-10-PCS |
| BT29YZZ | Computerized Tomography (CT Scan) of Kidney Transplant using Other Contrast | Procedure | ICD-10-PCS |
| BT29ZZZ | Computerized Tomography (CT Scan) of Kidney Transplant | Procedure | ICD-10-PCS |
| BT39 | Magnetic Resonance Imaging (MRI) / Kidney Transplant | Procedure | ICD-10-PCS |
| BT39Y0Z | Magnetic Resonance Imaging (MRI) of Kidney Transplant using Other Contrast, Unenhanced and Enhanced | Procedure | ICD-10-PCS |
| BT39YZZ | Magnetic Resonance Imaging (MRI) of Kidney Transplant using Other Contrast | Procedure | ICD-10-PCS |
| BT39ZZZ | Magnetic Resonance Imaging (MRI) of Kidney Transplant | Procedure | ICD-10-PCS |
| BT49 | Ultrasonography / Kidney Transplant | Procedure | ICD-10-PCS |
| BT49ZZZ | Ultrasonography of Kidney Transplant | Procedure | ICD-10-PCS |
| C00.0 | Malignant neoplasm of external upper lip | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C00.1 | Malignant neoplasm of external lower lip | Diagnosis | ICD-10-CM |
| C00.2 | Malignant neoplasm of external lip, unspecified | Diagnosis | ICD-10-CM |
| C00.3 | Malignant neoplasm of upper lip, inner aspect | Diagnosis | ICD-10-CM |
| C00.4 | Malignant neoplasm of lower lip, inner aspect | Diagnosis | ICD-10-CM |
| C00.5 | Malignant neoplasm of lip, unspecified, inner aspect | Diagnosis | ICD-10-CM |
| C00.6 | Malignant neoplasm of commissure of lip, unspecified | Diagnosis | ICD-10-CM |
| C00.8 | Malignant neoplasm of overlapping sites of lip | Diagnosis | ICD-10-CM |
| C00.9 | Malignant neoplasm of lip, unspecified | Diagnosis | ICD-10-CM |
| C01 | Malignant neoplasm of base of tongue | Diagnosis | ICD-10-CM |
| C02.0 | Malignant neoplasm of dorsal surface of tongue | Diagnosis | ICD-10-CM |
| C02.1 | Malignant neoplasm of border of tongue | Diagnosis | ICD-10-CM |
| C02.2 | Malignant neoplasm of ventral surface of tongue | Diagnosis | ICD-10-CM |
| C02.3 | Malignant neoplasm of anterior two-thirds of tongue, part unspecified | Diagnosis | ICD-10-CM |
| C02.4 | Malignant neoplasm of lingual tonsil | Diagnosis | ICD-10-CM |
| C02.8 | Malignant neoplasm of overlapping sites of tongue | Diagnosis | ICD-10-CM |
| C02.9 | Malignant neoplasm of tongue, unspecified | Diagnosis | ICD-10-CM |
| C03.0 | Malignant neoplasm of upper gum | Diagnosis | ICD-10-CM |
| C03.1 | Malignant neoplasm of lower gum | Diagnosis | ICD-10-CM |
| C03.9 | Malignant neoplasm of gum, unspecified | Diagnosis | ICD-10-CM |
| C04.0 | Malignant neoplasm of anterior floor of mouth | Diagnosis | ICD-10-CM |
| C04.1 | Malignant neoplasm of lateral floor of mouth | Diagnosis | ICD-10-CM |
| C04.8 | Malignant neoplasm of overlapping sites of floor of mouth | Diagnosis | ICD-10-CM |
| C04.9 | Malignant neoplasm of floor of mouth, unspecified | Diagnosis | ICD-10-CM |
| C05.0 | Malignant neoplasm of hard palate | Diagnosis | ICD-10-CM |
| C05.1 | Malignant neoplasm of soft palate | Diagnosis | ICD-10-CM |
| C05.2 | Malignant neoplasm of uvula | Diagnosis | ICD-10-CM |
| C05.8 | Malignant neoplasm of overlapping sites of palate | Diagnosis | ICD-10-CM |
| C05.9 | Malignant neoplasm of palate, unspecified | Diagnosis | ICD-10-CM |
| C06.0 | Malignant neoplasm of cheek mucosa | Diagnosis | ICD-10-CM |
| C06.1 | Malignant neoplasm of vestibule of mouth | Diagnosis | ICD-10-CM |
| C06.2 | Malignant neoplasm of retromolar area | Diagnosis | ICD-10-CM |
| C06.80 | Malignant neoplasm of overlapping sites of unspecified parts of mouth | Diagnosis | ICD-10-CM |
| C06.89 | Malignant neoplasm of overlapping sites of other parts of mouth | Diagnosis | ICD-10-CM |
| C06.9 | Malignant neoplasm of mouth, unspecified | Diagnosis | ICD-10-CM |
| C07 | Malignant neoplasm of parotid gland | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------|---|---------------|-----------|
| C08.0 | Malignant neoplasm of submandibular gland | Diagnosis | ICD-10-CM |
| C08.1 | Malignant neoplasm of sublingual gland | Diagnosis | ICD-10-CM |
| C08.9 | Malignant neoplasm of major salivary gland, unspecified | Diagnosis | ICD-10-CM |
| C09.0 | Malignant neoplasm of tonsillar fossa | Diagnosis | ICD-10-CM |
| C09.1 | Malignant neoplasm of tonsillar pillar (anterior) (posterior) | Diagnosis | ICD-10-CM |
| C09.8 | Malignant neoplasm of overlapping sites of tonsil | Diagnosis | ICD-10-CM |
| C09.9 | Malignant neoplasm of tonsil, unspecified | Diagnosis | ICD-10-CM |
| C10.0 | Malignant neoplasm of vallecula | Diagnosis | ICD-10-CM |
| C10.1 | Malignant neoplasm of anterior surface of epiglottis | Diagnosis | ICD-10-CM |
| C10.2 | Malignant neoplasm of lateral wall of oropharynx | Diagnosis | ICD-10-CM |
| C10.3 | Malignant neoplasm of posterior wall of oropharynx | Diagnosis | ICD-10-CM |
| C10.4 | Malignant neoplasm of branchial cleft | Diagnosis | ICD-10-CM |
| C10.8 | Malignant neoplasm of overlapping sites of oropharynx | Diagnosis | ICD-10-CM |
| C10.9 | Malignant neoplasm of oropharynx, unspecified | Diagnosis | ICD-10-CM |
| C1084 | Denileukin diftitox, 300 mcg, ontak iv | Procedure | HCPCS |
| C1086 | Temozolomide, 5 mg, temodar | Procedure | HCPCS |
| C11.0 | Malignant neoplasm of superior wall of nasopharynx | Diagnosis | ICD-10-CM |
| C11.1 | Malignant neoplasm of posterior wall of nasopharynx | Diagnosis | ICD-10-CM |
| C11.2 | Malignant neoplasm of lateral wall of nasopharynx | Diagnosis | ICD-10-CM |
| C11.3 | Malignant neoplasm of anterior wall of nasopharynx | Diagnosis | ICD-10-CM |
| C11.8 | Malignant neoplasm of overlapping sites of nasopharynx | Diagnosis | ICD-10-CM |
| C11.9 | Malignant neoplasm of nasopharynx, unspecified | Diagnosis | ICD-10-CM |
| C1166 | Injection, cytarabine liposome, per 10 mg | Procedure | HCPCS |
| C1167 | Injection, epirubicin HCl, 2 mg | Procedure | HCPCS |
| C1178 | Injection, busulfan, per 6 mg | Procedure | HCPCS |
| C12 | Malignant neoplasm of pyriform sinus | Diagnosis | ICD-10-CM |
| C13.0 | Malignant neoplasm of postcricoid region | Diagnosis | ICD-10-CM |
| C13.1 | Malignant neoplasm of aryepiglottic fold, hypopharyngeal aspect | Diagnosis | ICD-10-CM |
| C13.2 | Malignant neoplasm of posterior wall of hypopharynx | Diagnosis | ICD-10-CM |
| C13.8 | Malignant neoplasm of overlapping sites of hypopharynx | Diagnosis | ICD-10-CM |
| C13.9 | Malignant neoplasm of hypopharynx, unspecified | Diagnosis | ICD-10-CM |
| C14.0 | Malignant neoplasm of pharynx, unspecified | Diagnosis | ICD-10-CM |
| C14.2 | Malignant neoplasm of Waldeyer's ring | Diagnosis | ICD-10-CM |
| C14.8 | Malignant neoplasm of overlapping sites of lip, oral cavity and pharynx | Diagnosis | ICD-10-CM |
| C15.3 | Malignant neoplasm of upper third of esophagus | Diagnosis | ICD-10-CM |
| C15.4 | Malignant neoplasm of middle third of esophagus | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------------|--|----------------------|------------------|
| C15.5 | Malignant neoplasm of lower third of esophagus | Diagnosis | ICD-10-CM |
| C15.8 | Malignant neoplasm of overlapping sites of esophagus | Diagnosis | ICD-10-CM |
| C15.9 | Malignant neoplasm of esophagus, unspecified | Diagnosis | ICD-10-CM |
| C16.0 | Malignant neoplasm of cardia | Diagnosis | ICD-10-CM |
| C16.1 | Malignant neoplasm of fundus of stomach | Diagnosis | ICD-10-CM |
| C16.2 | Malignant neoplasm of body of stomach | Diagnosis | ICD-10-CM |
| C16.3 | Malignant neoplasm of pyloric antrum | Diagnosis | ICD-10-CM |
| C16.4 | Malignant neoplasm of pylorus | Diagnosis | ICD-10-CM |
| C16.5 | Malignant neoplasm of lesser curvature of stomach, unspecified | Diagnosis | ICD-10-CM |
| C16.6 | Malignant neoplasm of greater curvature of stomach, unspecified | Diagnosis | ICD-10-CM |
| C16.8 | Malignant neoplasm of overlapping sites of stomach | Diagnosis | ICD-10-CM |
| C16.9 | Malignant neoplasm of stomach, unspecified | Diagnosis | ICD-10-CM |
| C17.0 | Malignant neoplasm of duodenum | Diagnosis | ICD-10-CM |
| C17.1 | Malignant neoplasm of jejunum | Diagnosis | ICD-10-CM |
| C17.2 | Malignant neoplasm of ileum | Diagnosis | ICD-10-CM |
| C17.3 | Meckel's diverticulum, malignant | Diagnosis | ICD-10-CM |
| C17.8 | Malignant neoplasm of overlapping sites of small intestine | Diagnosis | ICD-10-CM |
| C17.9 | Malignant neoplasm of small intestine, unspecified | Diagnosis | ICD-10-CM |
| C18.0 | Malignant neoplasm of cecum | Diagnosis | ICD-10-CM |
| C18.1 | Malignant neoplasm of appendix | Diagnosis | ICD-10-CM |
| C18.2 | Malignant neoplasm of ascending colon | Diagnosis | ICD-10-CM |
| C18.3 | Malignant neoplasm of hepatic flexure | Diagnosis | ICD-10-CM |
| C18.4 | Malignant neoplasm of transverse colon | Diagnosis | ICD-10-CM |
| C18.5 | Malignant neoplasm of splenic flexure | Diagnosis | ICD-10-CM |
| C18.6 | Malignant neoplasm of descending colon | Diagnosis | ICD-10-CM |
| C18.7 | Malignant neoplasm of sigmoid colon | Diagnosis | ICD-10-CM |
| C18.8 | Malignant neoplasm of overlapping sites of colon | Diagnosis | ICD-10-CM |
| C18.9 | Malignant neoplasm of colon, unspecified | Diagnosis | ICD-10-CM |
| C19 | Malignant neoplasm of rectosigmoid junction | Diagnosis | ICD-10-CM |
| C20 | Malignant neoplasm of rectum | Diagnosis | ICD-10-CM |
| C21.0 | Malignant neoplasm of anus, unspecified | Diagnosis | ICD-10-CM |
| C21.1 | Malignant neoplasm of anal canal | Diagnosis | ICD-10-CM |
| C21.2 | Malignant neoplasm of cloacogenic zone | Diagnosis | ICD-10-CM |
| C21.8 | Malignant neoplasm of overlapping sites of rectum, anus and anal canal | Diagnosis | ICD-10-CM |
| C22.0 | Liver cell carcinoma | Diagnosis | ICD-10-CM |
| C22.1 | Intrahepatic bile duct carcinoma | Diagnosis | ICD-10-CM |
| C22.2 | Hepatoblastoma | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C22.3 | Angiosarcoma of liver | Diagnosis | ICD-10-CM |
| C22.4 | Other sarcomas of liver | Diagnosis | ICD-10-CM |
| C22.7 | Other specified carcinomas of liver | Diagnosis | ICD-10-CM |
| C22.8 | Malignant neoplasm of liver, primary, unspecified as to type | Diagnosis | ICD-10-CM |
| C22.9 | Malignant neoplasm of liver, not specified as primary or secondary | Diagnosis | ICD-10-CM |
| C23 | Malignant neoplasm of gallbladder | Diagnosis | ICD-10-CM |
| C24.0 | Malignant neoplasm of extrahepatic bile duct | Diagnosis | ICD-10-CM |
| C24.1 | Malignant neoplasm of ampulla of Vater | Diagnosis | ICD-10-CM |
| C24.8 | Malignant neoplasm of overlapping sites of biliary tract | Diagnosis | ICD-10-CM |
| C24.9 | Malignant neoplasm of biliary tract, unspecified | Diagnosis | ICD-10-CM |
| C25.0 | Malignant neoplasm of head of pancreas | Diagnosis | ICD-10-CM |
| C25.1 | Malignant neoplasm of body of pancreas | Diagnosis | ICD-10-CM |
| C25.2 | Malignant neoplasm of tail of pancreas | Diagnosis | ICD-10-CM |
| C25.3 | Malignant neoplasm of pancreatic duct | Diagnosis | ICD-10-CM |
| C25.4 | Malignant neoplasm of endocrine pancreas | Diagnosis | ICD-10-CM |
| C25.7 | Malignant neoplasm of other parts of pancreas | Diagnosis | ICD-10-CM |
| C25.8 | Malignant neoplasm of overlapping sites of pancreas | Diagnosis | ICD-10-CM |
| C25.9 | Malignant neoplasm of pancreas, unspecified | Diagnosis | ICD-10-CM |
| C26.0 | Malignant neoplasm of intestinal tract, part unspecified | Diagnosis | ICD-10-CM |
| C26.1 | Malignant neoplasm of spleen | Diagnosis | ICD-10-CM |
| C26.9 | Malignant neoplasm of ill-defined sites within the digestive system | Diagnosis | ICD-10-CM |
| C30.0 | Malignant neoplasm of nasal cavity | Diagnosis | ICD-10-CM |
| C30.1 | Malignant neoplasm of middle ear | Diagnosis | ICD-10-CM |
| C31.0 | Malignant neoplasm of maxillary sinus | Diagnosis | ICD-10-CM |
| C31.1 | Malignant neoplasm of ethmoidal sinus | Diagnosis | ICD-10-CM |
| C31.2 | Malignant neoplasm of frontal sinus | Diagnosis | ICD-10-CM |
| C31.3 | Malignant neoplasm of sphenoid sinus | Diagnosis | ICD-10-CM |
| C31.8 | Malignant neoplasm of overlapping sites of accessory sinuses | Diagnosis | ICD-10-CM |
| C31.9 | Malignant neoplasm of accessory sinus, unspecified | Diagnosis | ICD-10-CM |
| C32.0 | Malignant neoplasm of glottis | Diagnosis | ICD-10-CM |
| C32.1 | Malignant neoplasm of supraglottis | Diagnosis | ICD-10-CM |
| C32.2 | Malignant neoplasm of subglottis | Diagnosis | ICD-10-CM |
| C32.3 | Malignant neoplasm of laryngeal cartilage | Diagnosis | ICD-10-CM |
| C32.8 | Malignant neoplasm of overlapping sites of larynx | Diagnosis | ICD-10-CM |
| C32.9 | Malignant neoplasm of larynx, unspecified | Diagnosis | ICD-10-CM |
| C33 | Malignant neoplasm of trachea | Diagnosis | ICD-10-CM |
| C34.00 | Malignant neoplasm of unspecified main bronchus | Diagnosis | ICD-10-CM |
| C34.01 | Malignant neoplasm of right main bronchus | Diagnosis | ICD-10-CM |
| C34.02 | Malignant neoplasm of left main bronchus | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| C34.10 | Malignant neoplasm of upper lobe, unspecified bronchus or lung | Diagnosis | ICD-10-CM |
| C34.11 | Malignant neoplasm of upper lobe, right bronchus or lung | Diagnosis | ICD-10-CM |
| C34.12 | Malignant neoplasm of upper lobe, left bronchus or lung | Diagnosis | ICD-10-CM |
| C34.2 | Malignant neoplasm of middle lobe, bronchus or lung | Diagnosis | ICD-10-CM |
| C34.30 | Malignant neoplasm of lower lobe, unspecified bronchus or lung | Diagnosis | ICD-10-CM |
| C34.31 | Malignant neoplasm of lower lobe, right bronchus or lung | Diagnosis | ICD-10-CM |
| C34.32 | Malignant neoplasm of lower lobe, left bronchus or lung | Diagnosis | ICD-10-CM |
| C34.80 | Malignant neoplasm of overlapping sites of unspecified bronchus and lung | Diagnosis | ICD-10-CM |
| C34.81 | Malignant neoplasm of overlapping sites of right bronchus and lung | Diagnosis | ICD-10-CM |
| C34.82 | Malignant neoplasm of overlapping sites of left bronchus and lung | Diagnosis | ICD-10-CM |
| C34.90 | Malignant neoplasm of unspecified part of unspecified bronchus or lung | Diagnosis | ICD-10-CM |
| C34.91 | Malignant neoplasm of unspecified part of right bronchus or lung | Diagnosis | ICD-10-CM |
| C34.92 | Malignant neoplasm of unspecified part of left bronchus or lung | Diagnosis | ICD-10-CM |
| C37 | Malignant neoplasm of thymus | Diagnosis | ICD-10-CM |
| C38.0 | Malignant neoplasm of heart | Diagnosis | ICD-10-CM |
| C38.1 | Malignant neoplasm of anterior mediastinum | Diagnosis | ICD-10-CM |
| C38.2 | Malignant neoplasm of posterior mediastinum | Diagnosis | ICD-10-CM |
| C38.3 | Malignant neoplasm of mediastinum, part unspecified | Diagnosis | ICD-10-CM |
| C38.4 | Malignant neoplasm of pleura | Diagnosis | ICD-10-CM |
| C38.8 | Malignant neoplasm of overlapping sites of heart, mediastinum and pleura | Diagnosis | ICD-10-CM |
| C39.0 | Malignant neoplasm of upper respiratory tract, part unspecified | Diagnosis | ICD-10-CM |
| C39.9 | Malignant neoplasm of lower respiratory tract, part unspecified | Diagnosis | ICD-10-CM |
| C40.00 | Malignant neoplasm of scapula and long bones of unspecified upper limb | Diagnosis | ICD-10-CM |
| C40.01 | Malignant neoplasm of scapula and long bones of right upper limb | Diagnosis | ICD-10-CM |
| C40.02 | Malignant neoplasm of scapula and long bones of left upper limb | Diagnosis | ICD-10-CM |
| C40.10 | Malignant neoplasm of short bones of unspecified upper limb | Diagnosis | ICD-10-CM |
| C40.11 | Malignant neoplasm of short bones of right upper limb | Diagnosis | ICD-10-CM |
| C40.12 | Malignant neoplasm of short bones of left upper limb | Diagnosis | ICD-10-CM |
| C40.20 | Malignant neoplasm of long bones of unspecified lower limb | Diagnosis | ICD-10-CM |
| C40.21 | Malignant neoplasm of long bones of right lower limb | Diagnosis | ICD-10-CM |
| C40.22 | Malignant neoplasm of long bones of left lower limb | Diagnosis | ICD-10-CM |
| C40.30 | Malignant neoplasm of short bones of unspecified lower limb | Diagnosis | ICD-10-CM |
| C40.31 | Malignant neoplasm of short bones of right lower limb | Diagnosis | ICD-10-CM |
| C40.32 | Malignant neoplasm of short bones of left lower limb | Diagnosis | ICD-10-CM |
| C40.80 | Malignant neoplasm of overlapping sites of bone and articular cartilage of unspecified | Diagnosis | ICD-10-CM |
| C40.81 | Malignant neoplasm of overlapping sites of bone and articular cartilage of right limb | Diagnosis | ICD-10-CM |
| C40.82 | Malignant neoplasm of overlapping sites of bone and articular cartilage of left limb | Diagnosis | ICD-10-CM |
| C40.90 | Malignant neoplasm of unspecified bones and articular cartilage of unspecified limb | Diagnosis | ICD-10-CM |
| C40.91 | Malignant neoplasm of unspecified bones and articular cartilage of right limb | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| C40.92 | Malignant neoplasm of unspecified bones and articular cartilage of left limb | Diagnosis | ICD-10-CM |
| C41.0 | Malignant neoplasm of bones of skull and face | Diagnosis | ICD-10-CM |
| C41.1 | Malignant neoplasm of mandible | Diagnosis | ICD-10-CM |
| C41.2 | Malignant neoplasm of vertebral column | Diagnosis | ICD-10-CM |
| C41.3 | Malignant neoplasm of ribs, sternum and clavicle | Diagnosis | ICD-10-CM |
| C41.4 | Malignant neoplasm of pelvic bones, sacrum and coccyx | Diagnosis | ICD-10-CM |
| C41.9 | Malignant neoplasm of bone and articular cartilage, unspecified | Diagnosis | ICD-10-CM |
| C43.0 | Malignant melanoma of lip | Diagnosis | ICD-10-CM |
| C43.10 | Malignant melanoma of unspecified eyelid, including canthus | Diagnosis | ICD-10-CM |
| C43.11 | Malignant melanoma of right eyelid, including canthus | Diagnosis | ICD-10-CM |
| C43.111 | Malignant melanoma of right upper eyelid, including canthus | Diagnosis | ICD-10-CM |
| C43.112 | Malignant melanoma of right lower eyelid, including canthus | Diagnosis | ICD-10-CM |
| C43.12 | Malignant melanoma of left eyelid, including canthus | Diagnosis | ICD-10-CM |
| C43.121 | Malignant melanoma of left upper eyelid, including canthus | Diagnosis | ICD-10-CM |
| C43.122 | Malignant melanoma of left lower eyelid, including canthus | Diagnosis | ICD-10-CM |
| C43.20 | Malignant melanoma of unspecified ear and external auricular canal | Diagnosis | ICD-10-CM |
| C43.21 | Malignant melanoma of right ear and external auricular canal | Diagnosis | ICD-10-CM |
| C43.22 | Malignant melanoma of left ear and external auricular canal | Diagnosis | ICD-10-CM |
| C43.30 | Malignant melanoma of unspecified part of face | Diagnosis | ICD-10-CM |
| C43.31 | Malignant melanoma of nose | Diagnosis | ICD-10-CM |
| C43.39 | Malignant melanoma of other parts of face | Diagnosis | ICD-10-CM |
| C43.4 | Malignant melanoma of scalp and neck | Diagnosis | ICD-10-CM |
| C43.51 | Malignant melanoma of anal skin | Diagnosis | ICD-10-CM |
| C43.52 | Malignant melanoma of skin of breast | Diagnosis | ICD-10-CM |
| C43.59 | Malignant melanoma of other part of trunk | Diagnosis | ICD-10-CM |
| C43.60 | Malignant melanoma of unspecified upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C43.61 | Malignant melanoma of right upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C43.62 | Malignant melanoma of left upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C43.70 | Malignant melanoma of unspecified lower limb, including hip | Diagnosis | ICD-10-CM |
| C43.71 | Malignant melanoma of right lower limb, including hip | Diagnosis | ICD-10-CM |
| C43.72 | Malignant melanoma of left lower limb, including hip | Diagnosis | ICD-10-CM |
| C43.8 | Malignant melanoma of overlapping sites of skin | Diagnosis | ICD-10-CM |
| C43.9 | Malignant melanoma of skin, unspecified | Diagnosis | ICD-10-CM |
| C45.0 | Mesothelioma of pleura | Diagnosis | ICD-10-CM |
| C45.1 | Mesothelioma of peritoneum | Diagnosis | ICD-10-CM |
| C45.2 | Mesothelioma of pericardium | Diagnosis | ICD-10-CM |
| C45.7 | Mesothelioma of other sites | Diagnosis | ICD-10-CM |
| C45.9 | Mesothelioma, unspecified | Diagnosis | ICD-10-CM |
| C46.0 | Kaposi's sarcoma of skin | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C46.1 | Kaposi's sarcoma of soft tissue | Diagnosis | ICD-10-CM |
| C46.2 | Kaposi's sarcoma of palate | Diagnosis | ICD-10-CM |
| C46.3 | Kaposi's sarcoma of lymph nodes | Diagnosis | ICD-10-CM |
| C46.4 | Kaposi's sarcoma of gastrointestinal sites | Diagnosis | ICD-10-CM |
| C46.50 | Kaposi's sarcoma of unspecified lung | Diagnosis | ICD-10-CM |
| C46.51 | Kaposi's sarcoma of right lung | Diagnosis | ICD-10-CM |
| C46.52 | Kaposi's sarcoma of left lung | Diagnosis | ICD-10-CM |
| C46.7 | Kaposi's sarcoma of other sites | Diagnosis | ICD-10-CM |
| C46.9 | Kaposi's sarcoma, unspecified | Diagnosis | ICD-10-CM |
| C47.0 | Malignant neoplasm of peripheral nerves of head, face and neck | Diagnosis | ICD-10-CM |
| C47.10 | Malignant neoplasm of peripheral nerves of unspecified upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C47.11 | Malignant neoplasm of peripheral nerves of right upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C47.12 | Malignant neoplasm of peripheral nerves of left upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C47.20 | Malignant neoplasm of peripheral nerves of unspecified lower limb, including hip | Diagnosis | ICD-10-CM |
| C47.21 | Malignant neoplasm of peripheral nerves of right lower limb, including hip | Diagnosis | ICD-10-CM |
| C47.22 | Malignant neoplasm of peripheral nerves of left lower limb, including hip | Diagnosis | ICD-10-CM |
| C47.3 | Malignant neoplasm of peripheral nerves of thorax | Diagnosis | ICD-10-CM |
| C47.4 | Malignant neoplasm of peripheral nerves of abdomen | Diagnosis | ICD-10-CM |
| C47.5 | Malignant neoplasm of peripheral nerves of pelvis | Diagnosis | ICD-10-CM |
| C47.6 | Malignant neoplasm of peripheral nerves of trunk, unspecified | Diagnosis | ICD-10-CM |
| C47.8 | Malignant neoplasm of overlapping sites of peripheral nerves and autonomic nervous system | Diagnosis | ICD-10-CM |
| C47.9 | Malignant neoplasm of peripheral nerves and autonomic nervous system, unspecified | Diagnosis | ICD-10-CM |
| C48.0 | Malignant neoplasm of retroperitoneum | Diagnosis | ICD-10-CM |
| C48.1 | Malignant neoplasm of specified parts of peritoneum | Diagnosis | ICD-10-CM |
| C48.2 | Malignant neoplasm of peritoneum, unspecified | Diagnosis | ICD-10-CM |
| C48.8 | Malignant neoplasm of overlapping sites of retroperitoneum and peritoneum | Diagnosis | ICD-10-CM |
| C49.0 | Malignant neoplasm of connective and soft tissue of head, face and neck | Diagnosis | ICD-10-CM |
| C49.10 | Malignant neoplasm of connective and soft tissue of unspecified upper limb, including | Diagnosis | ICD-10-CM |
| C49.11 | Malignant neoplasm of connective and soft tissue of right upper limb, including | Diagnosis | ICD-10-CM |
| C49.12 | Malignant neoplasm of connective and soft tissue of left upper limb, including | Diagnosis | ICD-10-CM |
| C49.20 | Malignant neoplasm of connective and soft tissue of unspecified lower limb, including | Diagnosis | ICD-10-CM |
| C49.21 | Malignant neoplasm of connective and soft tissue of right lower limb, including hip | Diagnosis | ICD-10-CM |
| C49.22 | Malignant neoplasm of connective and soft tissue of left lower limb, including hip | Diagnosis | ICD-10-CM |
| C49.3 | Malignant neoplasm of connective and soft tissue of thorax | Diagnosis | ICD-10-CM |
| C49.4 | Malignant neoplasm of connective and soft tissue of abdomen | Diagnosis | ICD-10-CM |
| C49.5 | Malignant neoplasm of connective and soft tissue of pelvis | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| C49.6 | Malignant neoplasm of connective and soft tissue of trunk, unspecified | Diagnosis | ICD-10-CM |
| C49.8 | Malignant neoplasm of overlapping sites of connective and soft tissue | Diagnosis | ICD-10-CM |
| C49.9 | Malignant neoplasm of connective and soft tissue, unspecified | Diagnosis | ICD-10-CM |
| C49.A0 | Gastrointestinal stromal tumor, unspecified site | Diagnosis | ICD-10-CM |
| C49.A1 | Gastrointestinal stromal tumor of esophagus | Diagnosis | ICD-10-CM |
| C49.A2 | Gastrointestinal stromal tumor of stomach | Diagnosis | ICD-10-CM |
| C49.A3 | Gastrointestinal stromal tumor of small intestine | Diagnosis | ICD-10-CM |
| C49.A4 | Gastrointestinal stromal tumor of large intestine | Diagnosis | ICD-10-CM |
| C49.A5 | Gastrointestinal stromal tumor of rectum | Diagnosis | ICD-10-CM |
| C49.A9 | Gastrointestinal stromal tumor of other sites | Diagnosis | ICD-10-CM |
| C4A.0 | Merkel cell carcinoma of lip | Diagnosis | ICD-10-CM |
| C4A.10 | Merkel cell carcinoma of unspecified eyelid, including canthus | Diagnosis | ICD-10-CM |
| C4A.11 | Merkel cell carcinoma of right eyelid, including canthus | Diagnosis | ICD-10-CM |
| C4A.111 | Merkel cell carcinoma of right upper eyelid, including canthus | Diagnosis | ICD-10-CM |
| C4A.112 | Merkel cell carcinoma of right lower eyelid, including canthus | Diagnosis | ICD-10-CM |
| C4A.12 | Merkel cell carcinoma of left eyelid, including canthus | Diagnosis | ICD-10-CM |
| C4A.121 | Merkel cell carcinoma of left upper eyelid, including canthus | Diagnosis | ICD-10-CM |
| C4A.122 | Merkel cell carcinoma of left lower eyelid, including canthus | Diagnosis | ICD-10-CM |
| C4A.20 | Merkel cell carcinoma of unspecified ear and external auricular canal | Diagnosis | ICD-10-CM |
| C4A.21 | Merkel cell carcinoma of right ear and external auricular canal | Diagnosis | ICD-10-CM |
| C4A.22 | Merkel cell carcinoma of left ear and external auricular canal | Diagnosis | ICD-10-CM |
| C4A.30 | Merkel cell carcinoma of unspecified part of face | Diagnosis | ICD-10-CM |
| C4A.31 | Merkel cell carcinoma of nose | Diagnosis | ICD-10-CM |
| C4A.39 | Merkel cell carcinoma of other parts of face | Diagnosis | ICD-10-CM |
| C4A.4 | Merkel cell carcinoma of scalp and neck | Diagnosis | ICD-10-CM |
| C4A.51 | Merkel cell carcinoma of anal skin | Diagnosis | ICD-10-CM |
| C4A.52 | Merkel cell carcinoma of skin of breast | Diagnosis | ICD-10-CM |
| C4A.59 | Merkel cell carcinoma of other part of trunk | Diagnosis | ICD-10-CM |
| C4A.60 | Merkel cell carcinoma of unspecified upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C4A.61 | Merkel cell carcinoma of right upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C4A.62 | Merkel cell carcinoma of left upper limb, including shoulder | Diagnosis | ICD-10-CM |
| C4A.70 | Merkel cell carcinoma of unspecified lower limb, including hip | Diagnosis | ICD-10-CM |
| C4A.71 | Merkel cell carcinoma of right lower limb, including hip | Diagnosis | ICD-10-CM |
| C4A.72 | Merkel cell carcinoma of left lower limb, including hip | Diagnosis | ICD-10-CM |
| C4A.8 | Merkel cell carcinoma of overlapping sites | Diagnosis | ICD-10-CM |
| C4A.9 | Merkel cell carcinoma, unspecified | Diagnosis | ICD-10-CM |
| C50.011 | Malignant neoplasm of nipple and areola, right female breast | Diagnosis | ICD-10-CM |
| C50.012 | Malignant neoplasm of nipple and areola, left female breast | Diagnosis | ICD-10-CM |
| C50.019 | Malignant neoplasm of nipple and areola, unspecified female breast | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| C50.021 | Malignant neoplasm of nipple and areola, right male breast | Diagnosis | ICD-10-CM |
| C50.022 | Malignant neoplasm of nipple and areola, left male breast | Diagnosis | ICD-10-CM |
| C50.029 | Malignant neoplasm of nipple and areola, unspecified male breast | Diagnosis | ICD-10-CM |
| C50.111 | Malignant neoplasm of central portion of right female breast | Diagnosis | ICD-10-CM |
| C50.112 | Malignant neoplasm of central portion of left female breast | Diagnosis | ICD-10-CM |
| C50.119 | Malignant neoplasm of central portion of unspecified female breast | Diagnosis | ICD-10-CM |
| C50.121 | Malignant neoplasm of central portion of right male breast | Diagnosis | ICD-10-CM |
| C50.122 | Malignant neoplasm of central portion of left male breast | Diagnosis | ICD-10-CM |
| C50.129 | Malignant neoplasm of central portion of unspecified male breast | Diagnosis | ICD-10-CM |
| C50.211 | Malignant neoplasm of upper-inner quadrant of right female breast | Diagnosis | ICD-10-CM |
| C50.212 | Malignant neoplasm of upper-inner quadrant of left female breast | Diagnosis | ICD-10-CM |
| C50.219 | Malignant neoplasm of upper-inner quadrant of unspecified female breast | Diagnosis | ICD-10-CM |
| C50.221 | Malignant neoplasm of upper-inner quadrant of right male breast | Diagnosis | ICD-10-CM |
| C50.222 | Malignant neoplasm of upper-inner quadrant of left male breast | Diagnosis | ICD-10-CM |
| C50.229 | Malignant neoplasm of upper-inner quadrant of unspecified male breast | Diagnosis | ICD-10-CM |
| C50.311 | Malignant neoplasm of lower-inner quadrant of right female breast | Diagnosis | ICD-10-CM |
| C50.312 | Malignant neoplasm of lower-inner quadrant of left female breast | Diagnosis | ICD-10-CM |
| C50.319 | Malignant neoplasm of lower-inner quadrant of unspecified female breast | Diagnosis | ICD-10-CM |
| C50.321 | Malignant neoplasm of lower-inner quadrant of right male breast | Diagnosis | ICD-10-CM |
| C50.322 | Malignant neoplasm of lower-inner quadrant of left male breast | Diagnosis | ICD-10-CM |
| C50.329 | Malignant neoplasm of lower-inner quadrant of unspecified male breast | Diagnosis | ICD-10-CM |
| C50.411 | Malignant neoplasm of upper-outer quadrant of right female breast | Diagnosis | ICD-10-CM |
| C50.412 | Malignant neoplasm of upper-outer quadrant of left female breast | Diagnosis | ICD-10-CM |
| C50.419 | Malignant neoplasm of upper-outer quadrant of unspecified female breast | Diagnosis | ICD-10-CM |
| C50.421 | Malignant neoplasm of upper-outer quadrant of right male breast | Diagnosis | ICD-10-CM |
| C50.422 | Malignant neoplasm of upper-outer quadrant of left male breast | Diagnosis | ICD-10-CM |
| C50.429 | Malignant neoplasm of upper-outer quadrant of unspecified male breast | Diagnosis | ICD-10-CM |
| C50.511 | Malignant neoplasm of lower-outer quadrant of right female breast | Diagnosis | ICD-10-CM |
| C50.512 | Malignant neoplasm of lower-outer quadrant of left female breast | Diagnosis | ICD-10-CM |
| C50.519 | Malignant neoplasm of lower-outer quadrant of unspecified female breast | Diagnosis | ICD-10-CM |
| C50.521 | Malignant neoplasm of lower-outer quadrant of right male breast | Diagnosis | ICD-10-CM |
| C50.522 | Malignant neoplasm of lower-outer quadrant of left male breast | Diagnosis | ICD-10-CM |
| C50.529 | Malignant neoplasm of lower-outer quadrant of unspecified male breast | Diagnosis | ICD-10-CM |
| C50.611 | Malignant neoplasm of axillary tail of right female breast | Diagnosis | ICD-10-CM |
| C50.612 | Malignant neoplasm of axillary tail of left female breast | Diagnosis | ICD-10-CM |
| C50.619 | Malignant neoplasm of axillary tail of unspecified female breast | Diagnosis | ICD-10-CM |
| C50.621 | Malignant neoplasm of axillary tail of right male breast | Diagnosis | ICD-10-CM |
| C50.622 | Malignant neoplasm of axillary tail of left male breast | Diagnosis | ICD-10-CM |
| C50.629 | Malignant neoplasm of axillary tail of unspecified male breast | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| C50.811 | Malignant neoplasm of overlapping sites of right female breast | Diagnosis | ICD-10-CM |
| C50.812 | Malignant neoplasm of overlapping sites of left female breast | Diagnosis | ICD-10-CM |
| C50.819 | Malignant neoplasm of overlapping sites of unspecified female breast | Diagnosis | ICD-10-CM |
| C50.821 | Malignant neoplasm of overlapping sites of right male breast | Diagnosis | ICD-10-CM |
| C50.822 | Malignant neoplasm of overlapping sites of left male breast | Diagnosis | ICD-10-CM |
| C50.829 | Malignant neoplasm of overlapping sites of unspecified male breast | Diagnosis | ICD-10-CM |
| C50.911 | Malignant neoplasm of unspecified site of right female breast | Diagnosis | ICD-10-CM |
| C50.912 | Malignant neoplasm of unspecified site of left female breast | Diagnosis | ICD-10-CM |
| C50.919 | Malignant neoplasm of unspecified site of unspecified female breast | Diagnosis | ICD-10-CM |
| C50.921 | Malignant neoplasm of unspecified site of right male breast | Diagnosis | ICD-10-CM |
| C50.922 | Malignant neoplasm of unspecified site of left male breast | Diagnosis | ICD-10-CM |
| C50.929 | Malignant neoplasm of unspecified site of unspecified male breast | Diagnosis | ICD-10-CM |
| C51.0 | Malignant neoplasm of labium majus | Diagnosis | ICD-10-CM |
| C51.1 | Malignant neoplasm of labium minus | Diagnosis | ICD-10-CM |
| C51.2 | Malignant neoplasm of clitoris | Diagnosis | ICD-10-CM |
| C51.8 | Malignant neoplasm of overlapping sites of vulva | Diagnosis | ICD-10-CM |
| C51.9 | Malignant neoplasm of vulva, unspecified | Diagnosis | ICD-10-CM |
| C52 | Malignant neoplasm of vagina | Diagnosis | ICD-10-CM |
| C53.0 | Malignant neoplasm of endocervix | Diagnosis | ICD-10-CM |
| C53.1 | Malignant neoplasm of exocervix | Diagnosis | ICD-10-CM |
| C53.8 | Malignant neoplasm of overlapping sites of cervix uteri | Diagnosis | ICD-10-CM |
| C53.9 | Malignant neoplasm of cervix uteri, unspecified | Diagnosis | ICD-10-CM |
| C54.0 | Malignant neoplasm of isthmus uteri | Diagnosis | ICD-10-CM |
| C54.1 | Malignant neoplasm of endometrium | Diagnosis | ICD-10-CM |
| C54.2 | Malignant neoplasm of myometrium | Diagnosis | ICD-10-CM |
| C54.3 | Malignant neoplasm of fundus uteri | Diagnosis | ICD-10-CM |
| C54.8 | Malignant neoplasm of overlapping sites of corpus uteri | Diagnosis | ICD-10-CM |
| C54.9 | Malignant neoplasm of corpus uteri, unspecified | Diagnosis | ICD-10-CM |
| C55 | Malignant neoplasm of uterus, part unspecified | Diagnosis | ICD-10-CM |
| C56.1 | Malignant neoplasm of right ovary | Diagnosis | ICD-10-CM |
| C56.2 | Malignant neoplasm of left ovary | Diagnosis | ICD-10-CM |
| C56.9 | Malignant neoplasm of unspecified ovary | Diagnosis | ICD-10-CM |
| C57.00 | Malignant neoplasm of unspecified fallopian tube | Diagnosis | ICD-10-CM |
| C57.01 | Malignant neoplasm of right fallopian tube | Diagnosis | ICD-10-CM |
| C57.02 | Malignant neoplasm of left fallopian tube | Diagnosis | ICD-10-CM |
| C57.10 | Malignant neoplasm of unspecified broad ligament | Diagnosis | ICD-10-CM |
| C57.11 | Malignant neoplasm of right broad ligament | Diagnosis | ICD-10-CM |
| C57.12 | Malignant neoplasm of left broad ligament | Diagnosis | ICD-10-CM |
| C57.20 | Malignant neoplasm of unspecified round ligament | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| C57.21 | Malignant neoplasm of right round ligament | Diagnosis | ICD-10-CM |
| C57.22 | Malignant neoplasm of left round ligament | Diagnosis | ICD-10-CM |
| C57.3 | Malignant neoplasm of parametrium | Diagnosis | ICD-10-CM |
| C57.4 | Malignant neoplasm of uterine adnexa, unspecified | Diagnosis | ICD-10-CM |
| C57.7 | Malignant neoplasm of other specified female genital organs | Diagnosis | ICD-10-CM |
| C57.8 | Malignant neoplasm of overlapping sites of female genital organs | Diagnosis | ICD-10-CM |
| C57.9 | Malignant neoplasm of female genital organ, unspecified | Diagnosis | ICD-10-CM |
| C58 | Malignant neoplasm of placenta | Diagnosis | ICD-10-CM |
| C60.0 | Malignant neoplasm of prepuce | Diagnosis | ICD-10-CM |
| C60.1 | Malignant neoplasm of glans penis | Diagnosis | ICD-10-CM |
| C60.2 | Malignant neoplasm of body of penis | Diagnosis | ICD-10-CM |
| C60.8 | Malignant neoplasm of overlapping sites of penis | Diagnosis | ICD-10-CM |
| C60.9 | Malignant neoplasm of penis, unspecified | Diagnosis | ICD-10-CM |
| C61 | Malignant neoplasm of prostate | Diagnosis | ICD-10-CM |
| C62.00 | Malignant neoplasm of unspecified undescended testis | Diagnosis | ICD-10-CM |
| C62.01 | Malignant neoplasm of undescended right testis | Diagnosis | ICD-10-CM |
| C62.02 | Malignant neoplasm of undescended left testis | Diagnosis | ICD-10-CM |
| C62.10 | Malignant neoplasm of unspecified descended testis | Diagnosis | ICD-10-CM |
| C62.11 | Malignant neoplasm of descended right testis | Diagnosis | ICD-10-CM |
| C62.12 | Malignant neoplasm of descended left testis | Diagnosis | ICD-10-CM |
| C62.90 | Malignant neoplasm of unspecified testis, unspecified whether descended or | Diagnosis | ICD-10-CM |
| C62.91 | Malignant neoplasm of right testis, unspecified whether descended or undescended | Diagnosis | ICD-10-CM |
| C62.92 | Malignant neoplasm of left testis, unspecified whether descended or undescended | Diagnosis | ICD-10-CM |
| C63.00 | Malignant neoplasm of unspecified epididymis | Diagnosis | ICD-10-CM |
| C63.01 | Malignant neoplasm of right epididymis | Diagnosis | ICD-10-CM |
| C63.02 | Malignant neoplasm of left epididymis | Diagnosis | ICD-10-CM |
| C63.10 | Malignant neoplasm of unspecified spermatic cord | Diagnosis | ICD-10-CM |
| C63.11 | Malignant neoplasm of right spermatic cord | Diagnosis | ICD-10-CM |
| C63.12 | Malignant neoplasm of left spermatic cord | Diagnosis | ICD-10-CM |
| C63.2 | Malignant neoplasm of scrotum | Diagnosis | ICD-10-CM |
| C63.7 | Malignant neoplasm of other specified male genital organs | Diagnosis | ICD-10-CM |
| C63.8 | Malignant neoplasm of overlapping sites of male genital organs | Diagnosis | ICD-10-CM |
| C63.9 | Malignant neoplasm of male genital organ, unspecified | Diagnosis | ICD-10-CM |
| C64.1 | Malignant neoplasm of right kidney, except renal pelvis | Diagnosis | ICD-10-CM |
| C64.2 | Malignant neoplasm of left kidney, except renal pelvis | Diagnosis | ICD-10-CM |
| C64.9 | Malignant neoplasm of unspecified kidney, except renal pelvis | Diagnosis | ICD-10-CM |
| C65.1 | Malignant neoplasm of right renal pelvis | Diagnosis | ICD-10-CM |
| C65.2 | Malignant neoplasm of left renal pelvis | Diagnosis | ICD-10-CM |
| C65.9 | Malignant neoplasm of unspecified renal pelvis | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C66.1 | Malignant neoplasm of right ureter | Diagnosis | ICD-10-CM |
| C66.2 | Malignant neoplasm of left ureter | Diagnosis | ICD-10-CM |
| C66.9 | Malignant neoplasm of unspecified ureter | Diagnosis | ICD-10-CM |
| C67.0 | Malignant neoplasm of trigone of bladder | Diagnosis | ICD-10-CM |
| C67.1 | Malignant neoplasm of dome of bladder | Diagnosis | ICD-10-CM |
| C67.2 | Malignant neoplasm of lateral wall of bladder | Diagnosis | ICD-10-CM |
| C67.3 | Malignant neoplasm of anterior wall of bladder | Diagnosis | ICD-10-CM |
| C67.4 | Malignant neoplasm of posterior wall of bladder | Diagnosis | ICD-10-CM |
| C67.5 | Malignant neoplasm of bladder neck | Diagnosis | ICD-10-CM |
| C67.6 | Malignant neoplasm of ureteric orifice | Diagnosis | ICD-10-CM |
| C67.7 | Malignant neoplasm of urachus | Diagnosis | ICD-10-CM |
| C67.8 | Malignant neoplasm of overlapping sites of bladder | Diagnosis | ICD-10-CM |
| C67.9 | Malignant neoplasm of bladder, unspecified | Diagnosis | ICD-10-CM |
| C68.0 | Malignant neoplasm of urethra | Diagnosis | ICD-10-CM |
| C68.1 | Malignant neoplasm of paraurethral glands | Diagnosis | ICD-10-CM |
| C68.8 | Malignant neoplasm of overlapping sites of urinary organs | Diagnosis | ICD-10-CM |
| C68.9 | Malignant neoplasm of urinary organ, unspecified | Diagnosis | ICD-10-CM |
| C69.00 | Malignant neoplasm of unspecified conjunctiva | Diagnosis | ICD-10-CM |
| C69.01 | Malignant neoplasm of right conjunctiva | Diagnosis | ICD-10-CM |
| C69.02 | Malignant neoplasm of left conjunctiva | Diagnosis | ICD-10-CM |
| C69.10 | Malignant neoplasm of unspecified cornea | Diagnosis | ICD-10-CM |
| C69.11 | Malignant neoplasm of right cornea | Diagnosis | ICD-10-CM |
| C69.12 | Malignant neoplasm of left cornea | Diagnosis | ICD-10-CM |
| C69.20 | Malignant neoplasm of unspecified retina | Diagnosis | ICD-10-CM |
| C69.21 | Malignant neoplasm of right retina | Diagnosis | ICD-10-CM |
| C69.22 | Malignant neoplasm of left retina | Diagnosis | ICD-10-CM |
| C69.30 | Malignant neoplasm of unspecified choroid | Diagnosis | ICD-10-CM |
| C69.31 | Malignant neoplasm of right choroid | Diagnosis | ICD-10-CM |
| C69.32 | Malignant neoplasm of left choroid | Diagnosis | ICD-10-CM |
| C69.40 | Malignant neoplasm of unspecified ciliary body | Diagnosis | ICD-10-CM |
| C69.41 | Malignant neoplasm of right ciliary body | Diagnosis | ICD-10-CM |
| C69.42 | Malignant neoplasm of left ciliary body | Diagnosis | ICD-10-CM |
| C69.50 | Malignant neoplasm of unspecified lacrimal gland and duct | Diagnosis | ICD-10-CM |
| C69.51 | Malignant neoplasm of right lacrimal gland and duct | Diagnosis | ICD-10-CM |
| C69.52 | Malignant neoplasm of left lacrimal gland and duct | Diagnosis | ICD-10-CM |
| C69.60 | Malignant neoplasm of unspecified orbit | Diagnosis | ICD-10-CM |
| C69.61 | Malignant neoplasm of right orbit | Diagnosis | ICD-10-CM |
| C69.62 | Malignant neoplasm of left orbit | Diagnosis | ICD-10-CM |
| C69.80 | Malignant neoplasm of overlapping sites of unspecified eye and adnexa | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C69.81 | Malignant neoplasm of overlapping sites of right eye and adnexa | Diagnosis | ICD-10-CM |
| C69.82 | Malignant neoplasm of overlapping sites of left eye and adnexa | Diagnosis | ICD-10-CM |
| C69.90 | Malignant neoplasm of unspecified site of unspecified eye | Diagnosis | ICD-10-CM |
| C69.91 | Malignant neoplasm of unspecified site of right eye | Diagnosis | ICD-10-CM |
| C69.92 | Malignant neoplasm of unspecified site of left eye | Diagnosis | ICD-10-CM |
| C70.0 | Malignant neoplasm of cerebral meninges | Diagnosis | ICD-10-CM |
| C70.1 | Malignant neoplasm of spinal meninges | Diagnosis | ICD-10-CM |
| C70.9 | Malignant neoplasm of meninges, unspecified | Diagnosis | ICD-10-CM |
| C71.0 | Malignant neoplasm of cerebrum, except lobes and ventricles | Diagnosis | ICD-10-CM |
| C71.1 | Malignant neoplasm of frontal lobe | Diagnosis | ICD-10-CM |
| C71.2 | Malignant neoplasm of temporal lobe | Diagnosis | ICD-10-CM |
| C71.3 | Malignant neoplasm of parietal lobe | Diagnosis | ICD-10-CM |
| C71.4 | Malignant neoplasm of occipital lobe | Diagnosis | ICD-10-CM |
| C71.5 | Malignant neoplasm of cerebral ventricle | Diagnosis | ICD-10-CM |
| C71.6 | Malignant neoplasm of cerebellum | Diagnosis | ICD-10-CM |
| C71.7 | Malignant neoplasm of brain stem | Diagnosis | ICD-10-CM |
| C71.8 | Malignant neoplasm of overlapping sites of brain | Diagnosis | ICD-10-CM |
| C71.9 | Malignant neoplasm of brain, unspecified | Diagnosis | ICD-10-CM |
| C72.0 | Malignant neoplasm of spinal cord | Diagnosis | ICD-10-CM |
| C72.1 | Malignant neoplasm of cauda equina | Diagnosis | ICD-10-CM |
| C72.20 | Malignant neoplasm of unspecified olfactory nerve | Diagnosis | ICD-10-CM |
| C72.21 | Malignant neoplasm of right olfactory nerve | Diagnosis | ICD-10-CM |
| C72.22 | Malignant neoplasm of left olfactory nerve | Diagnosis | ICD-10-CM |
| C72.30 | Malignant neoplasm of unspecified optic nerve | Diagnosis | ICD-10-CM |
| C72.31 | Malignant neoplasm of right optic nerve | Diagnosis | ICD-10-CM |
| C72.32 | Malignant neoplasm of left optic nerve | Diagnosis | ICD-10-CM |
| C72.40 | Malignant neoplasm of unspecified acoustic nerve | Diagnosis | ICD-10-CM |
| C72.41 | Malignant neoplasm of right acoustic nerve | Diagnosis | ICD-10-CM |
| C72.42 | Malignant neoplasm of left acoustic nerve | Diagnosis | ICD-10-CM |
| C72.50 | Malignant neoplasm of unspecified cranial nerve | Diagnosis | ICD-10-CM |
| C72.59 | Malignant neoplasm of other cranial nerves | Diagnosis | ICD-10-CM |
| C72.9 | Malignant neoplasm of central nervous system, unspecified | Diagnosis | ICD-10-CM |
| C73 | Malignant neoplasm of thyroid gland | Diagnosis | ICD-10-CM |
| C74.00 | Malignant neoplasm of cortex of unspecified adrenal gland | Diagnosis | ICD-10-CM |
| C74.01 | Malignant neoplasm of cortex of right adrenal gland | Diagnosis | ICD-10-CM |
| C74.02 | Malignant neoplasm of cortex of left adrenal gland | Diagnosis | ICD-10-CM |
| C74.10 | Malignant neoplasm of medulla of unspecified adrenal gland | Diagnosis | ICD-10-CM |
| C74.11 | Malignant neoplasm of medulla of right adrenal gland | Diagnosis | ICD-10-CM |
| C74.12 | Malignant neoplasm of medulla of left adrenal gland | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| C74.90 | Malignant neoplasm of unspecified part of unspecified adrenal gland | Diagnosis | ICD-10-CM |
| C74.91 | Malignant neoplasm of unspecified part of right adrenal gland | Diagnosis | ICD-10-CM |
| C74.92 | Malignant neoplasm of unspecified part of left adrenal gland | Diagnosis | ICD-10-CM |
| C75.0 | Malignant neoplasm of parathyroid gland | Diagnosis | ICD-10-CM |
| C75.1 | Malignant neoplasm of pituitary gland | Diagnosis | ICD-10-CM |
| C75.2 | Malignant neoplasm of craniopharyngeal duct | Diagnosis | ICD-10-CM |
| C75.3 | Malignant neoplasm of pineal gland | Diagnosis | ICD-10-CM |
| C75.4 | Malignant neoplasm of carotid body | Diagnosis | ICD-10-CM |
| C75.5 | Malignant neoplasm of aortic body and other paraganglia | Diagnosis | ICD-10-CM |
| C75.8 | Malignant neoplasm with pluriglandular involvement, unspecified | Diagnosis | ICD-10-CM |
| C75.9 | Malignant neoplasm of endocrine gland, unspecified | Diagnosis | ICD-10-CM |
| C76.0 | Malignant neoplasm of head, face and neck | Diagnosis | ICD-10-CM |
| C76.1 | Malignant neoplasm of thorax | Diagnosis | ICD-10-CM |
| C76.2 | Malignant neoplasm of abdomen | Diagnosis | ICD-10-CM |
| C76.3 | Malignant neoplasm of pelvis | Diagnosis | ICD-10-CM |
| C76.40 | Malignant neoplasm of unspecified upper limb | Diagnosis | ICD-10-CM |
| C76.41 | Malignant neoplasm of right upper limb | Diagnosis | ICD-10-CM |
| C76.42 | Malignant neoplasm of left upper limb | Diagnosis | ICD-10-CM |
| C76.50 | Malignant neoplasm of unspecified lower limb | Diagnosis | ICD-10-CM |
| C76.51 | Malignant neoplasm of right lower limb | Diagnosis | ICD-10-CM |
| C76.52 | Malignant neoplasm of left lower limb | Diagnosis | ICD-10-CM |
| C76.8 | Malignant neoplasm of other specified ill-defined sites | Diagnosis | ICD-10-CM |
| C77.0 | Secondary and unspecified malignant neoplasm of lymph nodes of head, face and neck | Diagnosis | ICD-10-CM |
| C77.1 | Secondary and unspecified malignant neoplasm of intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C77.2 | Secondary and unspecified malignant neoplasm of intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C77.3 | Secondary and unspecified malignant neoplasm of axilla and upper limb lymph nodes | Diagnosis | ICD-10-CM |
| C77.4 | Secondary and unspecified malignant neoplasm of inguinal and lower limb lymph | Diagnosis | ICD-10-CM |
| C77.5 | Secondary and unspecified malignant neoplasm of intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C77.8 | Secondary and unspecified malignant neoplasm of lymph nodes of multiple regions | Diagnosis | ICD-10-CM |
| C77.9 | Secondary and unspecified malignant neoplasm of lymph node, unspecified | Diagnosis | ICD-10-CM |
| C78.00 | Secondary malignant neoplasm of unspecified lung | Diagnosis | ICD-10-CM |
| C78.01 | Secondary malignant neoplasm of right lung | Diagnosis | ICD-10-CM |
| C78.02 | Secondary malignant neoplasm of left lung | Diagnosis | ICD-10-CM |
| C78.1 | Secondary malignant neoplasm of mediastinum | Diagnosis | ICD-10-CM |
| C78.2 | Secondary malignant neoplasm of pleura | Diagnosis | ICD-10-CM |
| C78.30 | Secondary malignant neoplasm of unspecified respiratory organ | Diagnosis | ICD-10-CM |
| C78.39 | Secondary malignant neoplasm of other respiratory organs | Diagnosis | ICD-10-CM |
| C78.4 | Secondary malignant neoplasm of small intestine | Diagnosis | ICD-10-CM |
| C78.5 | Secondary malignant neoplasm of large intestine and rectum | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| C78.6 | Secondary malignant neoplasm of retroperitoneum and peritoneum | Diagnosis | ICD-10-CM |
| C78.7 | Secondary malignant neoplasm of liver and intrahepatic bile duct | Diagnosis | ICD-10-CM |
| C78.80 | Secondary malignant neoplasm of unspecified digestive organ | Diagnosis | ICD-10-CM |
| C78.89 | Secondary malignant neoplasm of other digestive organs | Diagnosis | ICD-10-CM |
| C79.00 | Secondary malignant neoplasm of unspecified kidney and renal pelvis | Diagnosis | ICD-10-CM |
| C79.01 | Secondary malignant neoplasm of right kidney and renal pelvis | Diagnosis | ICD-10-CM |
| C79.02 | Secondary malignant neoplasm of left kidney and renal pelvis | Diagnosis | ICD-10-CM |
| C79.10 | Secondary malignant neoplasm of unspecified urinary organs | Diagnosis | ICD-10-CM |
| C79.11 | Secondary malignant neoplasm of bladder | Diagnosis | ICD-10-CM |
| C79.19 | Secondary malignant neoplasm of other urinary organs | Diagnosis | ICD-10-CM |
| C79.2 | Secondary malignant neoplasm of skin | Diagnosis | ICD-10-CM |
| C79.31 | Secondary malignant neoplasm of brain | Diagnosis | ICD-10-CM |
| C79.32 | Secondary malignant neoplasm of cerebral meninges | Diagnosis | ICD-10-CM |
| C79.40 | Secondary malignant neoplasm of unspecified part of nervous system | Diagnosis | ICD-10-CM |
| C79.49 | Secondary malignant neoplasm of other parts of nervous system | Diagnosis | ICD-10-CM |
| C79.51 | Secondary malignant neoplasm of bone | Diagnosis | ICD-10-CM |
| C79.52 | Secondary malignant neoplasm of bone marrow | Diagnosis | ICD-10-CM |
| C79.60 | Secondary malignant neoplasm of unspecified ovary | Diagnosis | ICD-10-CM |
| C79.61 | Secondary malignant neoplasm of right ovary | Diagnosis | ICD-10-CM |
| C79.62 | Secondary malignant neoplasm of left ovary | Diagnosis | ICD-10-CM |
| C79.70 | Secondary malignant neoplasm of unspecified adrenal gland | Diagnosis | ICD-10-CM |
| C79.71 | Secondary malignant neoplasm of right adrenal gland | Diagnosis | ICD-10-CM |
| C79.72 | Secondary malignant neoplasm of left adrenal gland | Diagnosis | ICD-10-CM |
| C79.81 | Secondary malignant neoplasm of breast | Diagnosis | ICD-10-CM |
| C79.82 | Secondary malignant neoplasm of genital organs | Diagnosis | ICD-10-CM |
| C79.89 | Secondary malignant neoplasm of other specified sites | Diagnosis | ICD-10-CM |
| C79.9 | Secondary malignant neoplasm of unspecified site | Diagnosis | ICD-10-CM |
| C7A.00 | Malignant carcinoid tumor of unspecified site | Diagnosis | ICD-10-CM |
| C7A.010 | Malignant carcinoid tumor of the duodenum | Diagnosis | ICD-10-CM |
| C7A.011 | Malignant carcinoid tumor of the jejunum | Diagnosis | ICD-10-CM |
| C7A.012 | Malignant carcinoid tumor of the ileum | Diagnosis | ICD-10-CM |
| C7A.019 | Malignant carcinoid tumor of the small intestine, unspecified portion | Diagnosis | ICD-10-CM |
| C7A.020 | Malignant carcinoid tumor of the appendix | Diagnosis | ICD-10-CM |
| C7A.021 | Malignant carcinoid tumor of the cecum | Diagnosis | ICD-10-CM |
| C7A.022 | Malignant carcinoid tumor of the ascending colon | Diagnosis | ICD-10-CM |
| C7A.023 | Malignant carcinoid tumor of the transverse colon | Diagnosis | ICD-10-CM |
| C7A.024 | Malignant carcinoid tumor of the descending colon | Diagnosis | ICD-10-CM |
| C7A.025 | Malignant carcinoid tumor of the sigmoid colon | Diagnosis | ICD-10-CM |
| C7A.026 | Malignant carcinoid tumor of the rectum | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| C7A.029 | Malignant carcinoid tumor of the large intestine, unspecified portion | Diagnosis | ICD-10-CM |
| C7A.090 | Malignant carcinoid tumor of the bronchus and lung | Diagnosis | ICD-10-CM |
| C7A.091 | Malignant carcinoid tumor of the thymus | Diagnosis | ICD-10-CM |
| C7A.092 | Malignant carcinoid tumor of the stomach | Diagnosis | ICD-10-CM |
| C7A.093 | Malignant carcinoid tumor of the kidney | Diagnosis | ICD-10-CM |
| C7A.094 | Malignant carcinoid tumor of the foregut, unspecified | Diagnosis | ICD-10-CM |
| C7A.095 | Malignant carcinoid tumor of the midgut, unspecified | Diagnosis | ICD-10-CM |
| C7A.096 | Malignant carcinoid tumor of the hindgut, unspecified | Diagnosis | ICD-10-CM |
| C7A.098 | Malignant carcinoid tumors of other sites | Diagnosis | ICD-10-CM |
| C7A.1 | Malignant poorly differentiated neuroendocrine tumors | Diagnosis | ICD-10-CM |
| C7A.8 | Other malignant neuroendocrine tumors | Diagnosis | ICD-10-CM |
| C7B.00 | Secondary carcinoid tumors, unspecified site | Diagnosis | ICD-10-CM |
| C7B.01 | Secondary carcinoid tumors of distant lymph nodes | Diagnosis | ICD-10-CM |
| C7B.02 | Secondary carcinoid tumors of liver | Diagnosis | ICD-10-CM |
| C7B.03 | Secondary carcinoid tumors of bone | Diagnosis | ICD-10-CM |
| C7B.04 | Secondary carcinoid tumors of peritoneum | Diagnosis | ICD-10-CM |
| C7B.09 | Secondary carcinoid tumors of other sites | Diagnosis | ICD-10-CM |
| C7B.1 | Secondary Merkel cell carcinoma | Diagnosis | ICD-10-CM |
| C7B.8 | Other secondary neuroendocrine tumors | Diagnosis | ICD-10-CM |
| C80.0 | Disseminated malignant neoplasm, unspecified | Diagnosis | ICD-10-CM |
| C80.1 | Malignant (primary) neoplasm, unspecified | Diagnosis | ICD-10-CM |
| C80.2 | Malignant neoplasm associated with transplanted organ | Diagnosis | ICD-10-CM |
| C81.00 | Nodular lymphocyte predominant Hodgkin lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C81.01 | Nodular lymphocyte predominant Hodgkin lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C81.02 | Nodular lymphocyte predominant Hodgkin lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C81.03 | Nodular lymphocyte predominant Hodgkin lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C81.04 | Nodular lymphocyte predominant Hodgkin lymphoma, lymph nodes of axilla and | Diagnosis | ICD-10-CM |
| C81.05 | Nodular lymphocyte predominant Hodgkin lymphoma, lymph nodes of inguinal region | Diagnosis | ICD-10-CM |
| C81.06 | Nodular lymphocyte predominant Hodgkin lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C81.07 | Nodular lymphocyte predominant Hodgkin lymphoma, spleen | Diagnosis | ICD-10-CM |
| C81.08 | Nodular lymphocyte predominant Hodgkin lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C81.09 | Nodular lymphocyte predominant Hodgkin lymphoma, extranodal and solid organ | Diagnosis | ICD-10-CM |
| C81.10 | Nodular sclerosis Hodgkin lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C81.11 | Nodular sclerosis Hodgkin lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C81.12 | Nodular sclerosis Hodgkin lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C81.13 | Nodular sclerosis Hodgkin lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C81.14 | Nodular sclerosis Hodgkin lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C81.15 | Nodular sclerosis Hodgkin lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C81.16 | Nodular sclerosis Hodgkin lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C81.17 | Nodular sclerosis Hodgkin lymphoma, spleen | Diagnosis | ICD-10-CM |
| C81.18 | Nodular sclerosis Hodgkin lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C81.19 | Nodular sclerosis Hodgkin lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C81.20 | Mixed cellularity Hodgkin lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C81.21 | Mixed cellularity Hodgkin lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C81.22 | Mixed cellularity Hodgkin lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C81.23 | Mixed cellularity Hodgkin lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C81.24 | Mixed cellularity Hodgkin lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C81.25 | Mixed cellularity Hodgkin lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C81.26 | Mixed cellularity Hodgkin lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C81.27 | Mixed cellularity Hodgkin lymphoma, spleen | Diagnosis | ICD-10-CM |
| C81.28 | Mixed cellularity Hodgkin lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C81.29 | Mixed cellularity Hodgkin lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C81.30 | Lymphocyte depleted Hodgkin lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C81.31 | Lymphocyte depleted Hodgkin lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C81.32 | Lymphocyte depleted Hodgkin lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C81.33 | Lymphocyte depleted Hodgkin lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C81.34 | Lymphocyte depleted Hodgkin lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C81.35 | Lymphocyte depleted Hodgkin lymphoma, lymph nodes of inguinal region and lower | Diagnosis | ICD-10-CM |
| C81.36 | Lymphocyte depleted Hodgkin lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C81.37 | Lymphocyte depleted Hodgkin lymphoma, spleen | Diagnosis | ICD-10-CM |
| C81.38 | Lymphocyte depleted Hodgkin lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C81.39 | Lymphocyte depleted Hodgkin lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C81.40 | Lymphocyte-rich Hodgkin lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C81.41 | Lymphocyte-rich Hodgkin lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C81.42 | Lymphocyte-rich Hodgkin lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C81.43 | Lymphocyte-rich Hodgkin lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C81.44 | Lymphocyte-rich Hodgkin lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C81.45 | Lymphocyte-rich Hodgkin lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C81.46 | Lymphocyte-rich Hodgkin lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C81.47 | Lymphocyte-rich Hodgkin lymphoma, spleen | Diagnosis | ICD-10-CM |
| C81.48 | Lymphocyte-rich Hodgkin lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C81.49 | Lymphocyte-rich Hodgkin lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C81.70 | Other Hodgkin lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C81.71 | Other Hodgkin lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C81.72 | Other Hodgkin lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C81.73 | Other Hodgkin lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C81.74 | Other Hodgkin lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C81.75 | Other Hodgkin lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C81.76 | Other Hodgkin lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C81.77 | Other Hodgkin lymphoma, spleen | Diagnosis | ICD-10-CM |
| C81.78 | Other Hodgkin lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C81.79 | Other Hodgkin lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C81.90 | Hodgkin lymphoma, unspecified, unspecified site | Diagnosis | ICD-10-CM |
| C81.91 | Hodgkin lymphoma, unspecified, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C81.92 | Hodgkin lymphoma, unspecified, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C81.93 | Hodgkin lymphoma, unspecified, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C81.94 | Hodgkin lymphoma, unspecified, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C81.95 | Hodgkin lymphoma, unspecified, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C81.96 | Hodgkin lymphoma, unspecified, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C81.97 | Hodgkin lymphoma, unspecified, spleen | Diagnosis | ICD-10-CM |
| C81.98 | Hodgkin lymphoma, unspecified, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C81.99 | Hodgkin lymphoma, unspecified, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C82.00 | Follicular lymphoma grade I, unspecified site | Diagnosis | ICD-10-CM |
| C82.01 | Follicular lymphoma grade I, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C82.02 | Follicular lymphoma grade I, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C82.03 | Follicular lymphoma grade I, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C82.04 | Follicular lymphoma grade I, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C82.05 | Follicular lymphoma grade I, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C82.06 | Follicular lymphoma grade I, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C82.07 | Follicular lymphoma grade I, spleen | Diagnosis | ICD-10-CM |
| C82.08 | Follicular lymphoma grade I, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C82.09 | Follicular lymphoma grade I, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C82.10 | Follicular lymphoma grade II, unspecified site | Diagnosis | ICD-10-CM |
| C82.11 | Follicular lymphoma grade II, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C82.12 | Follicular lymphoma grade II, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C82.13 | Follicular lymphoma grade II, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C82.14 | Follicular lymphoma grade II, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C82.15 | Follicular lymphoma grade II, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C82.16 | Follicular lymphoma grade II, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C82.17 | Follicular lymphoma grade II, spleen | Diagnosis | ICD-10-CM |
| C82.18 | Follicular lymphoma grade II, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C82.19 | Follicular lymphoma grade II, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C82.20 | Follicular lymphoma grade III, unspecified, unspecified site | Diagnosis | ICD-10-CM |
| C82.21 | Follicular lymphoma grade III, unspecified, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C82.22 | Follicular lymphoma grade III, unspecified, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C82.23 | Follicular lymphoma grade III, unspecified, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| C82.24 | Follicular lymphoma grade III, unspecified, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C82.25 | Follicular lymphoma grade III, unspecified, lymph nodes of inguinal region and lower | Diagnosis | ICD-10-CM |
| C82.26 | Follicular lymphoma grade III, unspecified, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C82.27 | Follicular lymphoma grade III, unspecified, spleen | Diagnosis | ICD-10-CM |
| C82.28 | Follicular lymphoma grade III, unspecified, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C82.29 | Follicular lymphoma grade III, unspecified, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C82.30 | Follicular lymphoma grade IIIa, unspecified site | Diagnosis | ICD-10-CM |
| C82.31 | Follicular lymphoma grade IIIa, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C82.32 | Follicular lymphoma grade IIIa, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C82.33 | Follicular lymphoma grade IIIa, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C82.34 | Follicular lymphoma grade IIIa, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C82.35 | Follicular lymphoma grade IIIa, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C82.36 | Follicular lymphoma grade IIIa, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C82.37 | Follicular lymphoma grade IIIa, spleen | Diagnosis | ICD-10-CM |
| C82.38 | Follicular lymphoma grade IIIa, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C82.39 | Follicular lymphoma grade IIIa, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C82.40 | Follicular lymphoma grade IIIb, unspecified site | Diagnosis | ICD-10-CM |
| C82.41 | Follicular lymphoma grade IIIb, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C82.42 | Follicular lymphoma grade IIIb, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C82.43 | Follicular lymphoma grade IIIb, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C82.44 | Follicular lymphoma grade IIIb, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C82.45 | Follicular lymphoma grade IIIb, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C82.46 | Follicular lymphoma grade IIIb, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C82.47 | Follicular lymphoma grade IIIb, spleen | Diagnosis | ICD-10-CM |
| C82.48 | Follicular lymphoma grade IIIb, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C82.49 | Follicular lymphoma grade IIIb, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C82.50 | Diffuse follicle center lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C82.51 | Diffuse follicle center lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C82.52 | Diffuse follicle center lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C82.53 | Diffuse follicle center lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C82.54 | Diffuse follicle center lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C82.55 | Diffuse follicle center lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C82.56 | Diffuse follicle center lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C82.57 | Diffuse follicle center lymphoma, spleen | Diagnosis | ICD-10-CM |
| C82.58 | Diffuse follicle center lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C82.59 | Diffuse follicle center lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C82.60 | Cutaneous follicle center lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C82.61 | Cutaneous follicle center lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C82.62 | Cutaneous follicle center lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C82.63 | Cutaneous follicle center lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C82.64 | Cutaneous follicle center lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C82.65 | Cutaneous follicle center lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C82.66 | Cutaneous follicle center lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C82.67 | Cutaneous follicle center lymphoma, spleen | Diagnosis | ICD-10-CM |
| C82.68 | Cutaneous follicle center lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C82.69 | Cutaneous follicle center lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C82.80 | Other types of follicular lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C82.81 | Other types of follicular lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C82.82 | Other types of follicular lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C82.83 | Other types of follicular lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C82.84 | Other types of follicular lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C82.85 | Other types of follicular lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C82.86 | Other types of follicular lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C82.87 | Other types of follicular lymphoma, spleen | Diagnosis | ICD-10-CM |
| C82.88 | Other types of follicular lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C82.89 | Other types of follicular lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C82.90 | Follicular lymphoma, unspecified, unspecified site | Diagnosis | ICD-10-CM |
| C82.91 | Follicular lymphoma, unspecified, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C82.92 | Follicular lymphoma, unspecified, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C82.93 | Follicular lymphoma, unspecified, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C82.94 | Follicular lymphoma, unspecified, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C82.95 | Follicular lymphoma, unspecified, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C82.96 | Follicular lymphoma, unspecified, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C82.97 | Follicular lymphoma, unspecified, spleen | Diagnosis | ICD-10-CM |
| C82.98 | Follicular lymphoma, unspecified, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C82.99 | Follicular lymphoma, unspecified, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C83.00 | Small cell B-cell lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C83.01 | Small cell B-cell lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C83.02 | Small cell B-cell lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C83.03 | Small cell B-cell lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C83.04 | Small cell B-cell lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C83.05 | Small cell B-cell lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C83.06 | Small cell B-cell lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C83.07 | Small cell B-cell lymphoma, spleen | Diagnosis | ICD-10-CM |
| C83.08 | Small cell B-cell lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C83.09 | Small cell B-cell lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C83.10 | Mantle cell lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C83.11 | Mantle cell lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C83.12 | Mantle cell lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C83.13 | Mantle cell lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C83.14 | Mantle cell lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C83.15 | Mantle cell lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C83.16 | Mantle cell lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C83.17 | Mantle cell lymphoma, spleen | Diagnosis | ICD-10-CM |
| C83.18 | Mantle cell lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C83.19 | Mantle cell lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C83.30 | Diffuse large B-cell lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C83.31 | Diffuse large B-cell lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C83.32 | Diffuse large B-cell lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C83.33 | Diffuse large B-cell lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C83.34 | Diffuse large B-cell lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C83.35 | Diffuse large B-cell lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C83.36 | Diffuse large B-cell lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C83.37 | Diffuse large B-cell lymphoma, spleen | Diagnosis | ICD-10-CM |
| C83.38 | Diffuse large B-cell lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C83.39 | Diffuse large B-cell lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C83.50 | Lymphoblastic (diffuse) lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C83.51 | Lymphoblastic (diffuse) lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C83.52 | Lymphoblastic (diffuse) lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C83.53 | Lymphoblastic (diffuse) lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C83.54 | Lymphoblastic (diffuse) lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C83.55 | Lymphoblastic (diffuse) lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C83.56 | Lymphoblastic (diffuse) lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C83.57 | Lymphoblastic (diffuse) lymphoma, spleen | Diagnosis | ICD-10-CM |
| C83.58 | Lymphoblastic (diffuse) lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C83.59 | Lymphoblastic (diffuse) lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C83.70 | Burkitt lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C83.71 | Burkitt lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C83.72 | Burkitt lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C83.73 | Burkitt lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C83.74 | Burkitt lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C83.75 | Burkitt lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C83.76 | Burkitt lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C83.77 | Burkitt lymphoma, spleen | Diagnosis | ICD-10-CM |
| C83.78 | Burkitt lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C83.79 | Burkitt lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C83.80 | Other non-follicular lymphoma, unspecified site | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| C83.81 | Other non-follicular lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C83.82 | Other non-follicular lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C83.83 | Other non-follicular lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C83.84 | Other non-follicular lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C83.85 | Other non-follicular lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C83.86 | Other non-follicular lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C83.87 | Other non-follicular lymphoma, spleen | Diagnosis | ICD-10-CM |
| C83.88 | Other non-follicular lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C83.89 | Other non-follicular lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C83.90 | Non-follicular (diffuse) lymphoma, unspecified, unspecified site | Diagnosis | ICD-10-CM |
| C83.91 | Non-follicular (diffuse) lymphoma, unspecified, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C83.92 | Non-follicular (diffuse) lymphoma, unspecified, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C83.93 | Non-follicular (diffuse) lymphoma, unspecified, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C83.94 | Non-follicular (diffuse) lymphoma, unspecified, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C83.95 | Non-follicular (diffuse) lymphoma, unspecified, lymph nodes of inguinal region and | Diagnosis | ICD-10-CM |
| C83.96 | Non-follicular (diffuse) lymphoma, unspecified, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C83.97 | Non-follicular (diffuse) lymphoma, unspecified, spleen | Diagnosis | ICD-10-CM |
| C83.98 | Non-follicular (diffuse) lymphoma, unspecified, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C83.99 | Non-follicular (diffuse) lymphoma, unspecified, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C84.00 | Mycosis fungoides, unspecified site | Diagnosis | ICD-10-CM |
| C84.01 | Mycosis fungoides, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C84.02 | Mycosis fungoides, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C84.03 | Mycosis fungoides, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C84.04 | Mycosis fungoides, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C84.05 | Mycosis fungoides, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C84.06 | Mycosis fungoides, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C84.07 | Mycosis fungoides, spleen | Diagnosis | ICD-10-CM |
| C84.08 | Mycosis fungoides, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C84.09 | Mycosis fungoides, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C84.10 | Sezary disease, unspecified site | Diagnosis | ICD-10-CM |
| C84.11 | Sezary disease, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C84.12 | Sezary disease, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C84.13 | Sezary disease, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C84.14 | Sezary disease, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C84.15 | Sezary disease, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C84.16 | Sezary disease, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C84.17 | Sezary disease, spleen | Diagnosis | ICD-10-CM |
| C84.18 | Sezary disease, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C84.19 | Sezary disease, extranodal and solid organ sites | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| C84.40 | Peripheral T-cell lymphoma, not classified, unspecified site | Diagnosis | ICD-10-CM |
| C84.41 | Peripheral T-cell lymphoma, not classified, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C84.42 | Peripheral T-cell lymphoma, not classified, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C84.43 | Peripheral T-cell lymphoma, not classified, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C84.44 | Peripheral T-cell lymphoma, not classified, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C84.45 | Peripheral T-cell lymphoma, not classified, lymph nodes of inguinal region and lower | Diagnosis | ICD-10-CM |
| C84.46 | Peripheral T-cell lymphoma, not classified, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C84.47 | Peripheral T-cell lymphoma, not classified, spleen | Diagnosis | ICD-10-CM |
| C84.48 | Peripheral T-cell lymphoma, not classified, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C84.49 | Peripheral T-cell lymphoma, not classified, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C84.60 | Anaplastic large cell lymphoma, ALK-positive, unspecified site | Diagnosis | ICD-10-CM |
| C84.61 | Anaplastic large cell lymphoma, ALK-positive, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C84.62 | Anaplastic large cell lymphoma, ALK-positive, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C84.63 | Anaplastic large cell lymphoma, ALK-positive, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C84.64 | Anaplastic large cell lymphoma, ALK-positive, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C84.65 | Anaplastic large cell lymphoma, ALK-positive, lymph nodes of inguinal region and | Diagnosis | ICD-10-CM |
| C84.66 | Anaplastic large cell lymphoma, ALK-positive, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C84.67 | Anaplastic large cell lymphoma, ALK-positive, spleen | Diagnosis | ICD-10-CM |
| C84.68 | Anaplastic large cell lymphoma, ALK-positive, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C84.69 | Anaplastic large cell lymphoma, ALK-positive, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C84.70 | Anaplastic large cell lymphoma, ALK-negative, unspecified site | Diagnosis | ICD-10-CM |
| C84.71 | Anaplastic large cell lymphoma, ALK-negative, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C84.72 | Anaplastic large cell lymphoma, ALK-negative, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C84.73 | Anaplastic large cell lymphoma, ALK-negative, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C84.74 | Anaplastic large cell lymphoma, ALK-negative, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C84.75 | Anaplastic large cell lymphoma, ALK-negative, lymph nodes of inguinal region and | Diagnosis | ICD-10-CM |
| C84.76 | Anaplastic large cell lymphoma, ALK-negative, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C84.77 | Anaplastic large cell lymphoma, ALK-negative, spleen | Diagnosis | ICD-10-CM |
| C84.78 | Anaplastic large cell lymphoma, ALK-negative, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C84.79 | Anaplastic large cell lymphoma, ALK-negative, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C84.90 | Mature T/NK-cell lymphomas, unspecified, unspecified site | Diagnosis | ICD-10-CM |
| C84.91 | Mature T/NK-cell lymphomas, unspecified, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C84.92 | Mature T/NK-cell lymphomas, unspecified, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C84.93 | Mature T/NK-cell lymphomas, unspecified, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C84.94 | Mature T/NK-cell lymphomas, unspecified, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C84.95 | Mature T/NK-cell lymphomas, unspecified, lymph nodes of inguinal region and lower | Diagnosis | ICD-10-CM |
| C84.96 | Mature T/NK-cell lymphomas, unspecified, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C84.97 | Mature T/NK-cell lymphomas, unspecified, spleen | Diagnosis | ICD-10-CM |
| C84.98 | Mature T/NK-cell lymphomas, unspecified, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| C84.99 | Mature T/NK-cell lymphomas, unspecified, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C84.A0 | Cutaneous T-cell lymphoma, unspecified, unspecified site | Diagnosis | ICD-10-CM |
| C84.A1 | Cutaneous T-cell lymphoma, unspecified lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C84.A2 | Cutaneous T-cell lymphoma, unspecified, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C84.A3 | Cutaneous T-cell lymphoma, unspecified, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C84.A4 | Cutaneous T-cell lymphoma, unspecified, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C84.A5 | Cutaneous T-cell lymphoma, unspecified, lymph nodes of inguinal region and lower | Diagnosis | ICD-10-CM |
| C84.A6 | Cutaneous T-cell lymphoma, unspecified, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C84.A7 | Cutaneous T-cell lymphoma, unspecified, spleen | Diagnosis | ICD-10-CM |
| C84.A8 | Cutaneous T-cell lymphoma, unspecified, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C84.A9 | Cutaneous T-cell lymphoma, unspecified, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C84.Z0 | Other mature T/NK-cell lymphomas, unspecified site | Diagnosis | ICD-10-CM |
| C84.Z1 | Other mature T/NK-cell lymphomas, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C84.Z2 | Other mature T/NK-cell lymphomas, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C84.Z3 | Other mature T/NK-cell lymphomas, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C84.Z4 | Other mature T/NK-cell lymphomas, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C84.Z5 | Other mature T/NK-cell lymphomas, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C84.Z6 | Other mature T/NK-cell lymphomas, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C84.Z7 | Other mature T/NK-cell lymphomas, spleen | Diagnosis | ICD-10-CM |
| C84.Z8 | Other mature T/NK-cell lymphomas, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C84.Z9 | Other mature T/NK-cell lymphomas, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C85.10 | Unspecified B-cell lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C85.11 | Unspecified B-cell lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C85.12 | Unspecified B-cell lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C85.13 | Unspecified B-cell lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C85.14 | Unspecified B-cell lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C85.15 | Unspecified B-cell lymphoma, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C85.16 | Unspecified B-cell lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C85.17 | Unspecified B-cell lymphoma, spleen | Diagnosis | ICD-10-CM |
| C85.18 | Unspecified B-cell lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C85.19 | Unspecified B-cell lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C85.20 | Mediastinal (thymic) large B-cell lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C85.21 | Mediastinal (thymic) large B-cell lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C85.22 | Mediastinal (thymic) large B-cell lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C85.23 | Mediastinal (thymic) large B-cell lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C85.24 | Mediastinal (thymic) large B-cell lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C85.25 | Mediastinal (thymic) large B-cell lymphoma, lymph nodes of inguinal region and lower | Diagnosis | ICD-10-CM |
| C85.26 | Mediastinal (thymic) large B-cell lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C85.27 | Mediastinal (thymic) large B-cell lymphoma, spleen | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C85.28 | Mediastinal (thymic) large B-cell lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C85.29 | Mediastinal (thymic) large B-cell lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C85.80 | Other specified types of non-Hodgkin lymphoma, unspecified site | Diagnosis | ICD-10-CM |
| C85.81 | Other specified types of non-Hodgkin lymphoma, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C85.82 | Other specified types of non-Hodgkin lymphoma, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C85.83 | Other specified types of non-Hodgkin lymphoma, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C85.84 | Other specified types of non-Hodgkin lymphoma, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C85.85 | Other specified types of non-Hodgkin lymphoma, lymph nodes of inguinal region and | Diagnosis | ICD-10-CM |
| C85.86 | Other specified types of non-Hodgkin lymphoma, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C85.87 | Other specified types of non-Hodgkin lymphoma, spleen | Diagnosis | ICD-10-CM |
| C85.88 | Other specified types of non-Hodgkin lymphoma, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C85.89 | Other specified types of non-Hodgkin lymphoma, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C85.90 | Non-Hodgkin lymphoma, unspecified, unspecified site | Diagnosis | ICD-10-CM |
| C85.91 | Non-Hodgkin lymphoma, unspecified, lymph nodes of head, face, and neck | Diagnosis | ICD-10-CM |
| C85.92 | Non-Hodgkin lymphoma, unspecified, intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| C85.93 | Non-Hodgkin lymphoma, unspecified, intra-abdominal lymph nodes | Diagnosis | ICD-10-CM |
| C85.94 | Non-Hodgkin lymphoma, unspecified, lymph nodes of axilla and upper limb | Diagnosis | ICD-10-CM |
| C85.95 | Non-Hodgkin lymphoma, unspecified, lymph nodes of inguinal region and lower limb | Diagnosis | ICD-10-CM |
| C85.96 | Non-Hodgkin lymphoma, unspecified, intrapelvic lymph nodes | Diagnosis | ICD-10-CM |
| C85.97 | Non-Hodgkin lymphoma, unspecified, spleen | Diagnosis | ICD-10-CM |
| C85.98 | Non-Hodgkin lymphoma, unspecified, lymph nodes of multiple sites | Diagnosis | ICD-10-CM |
| C85.99 | Non-Hodgkin lymphoma, unspecified, extranodal and solid organ sites | Diagnosis | ICD-10-CM |
| C86.0 | Extranodal NK/T-cell lymphoma, nasal type | Diagnosis | ICD-10-CM |
| C86.1 | Hepatosplenic T-cell lymphoma | Diagnosis | ICD-10-CM |
| C86.2 | Enteropathy-type (intestinal) T-cell lymphoma | Diagnosis | ICD-10-CM |
| C86.3 | Subcutaneous panniculitis-like T-cell lymphoma | Diagnosis | ICD-10-CM |
| C86.4 | Blastic NK-cell lymphoma | Diagnosis | ICD-10-CM |
| C86.5 | Angioimmunoblastic T-cell lymphoma | Diagnosis | ICD-10-CM |
| C86.6 | Primary cutaneous CD30-positive T-cell proliferations | Diagnosis | ICD-10-CM |
| C88.0 | Waldenstrom macroglobulinemia | Diagnosis | ICD-10-CM |
| C88.4 | Extranodal marginal zone B-cell lymphoma of mucosa-associated lymphoid tissue | Diagnosis | ICD-10-CM |
| C88.8 | Other malignant immunoproliferative diseases | Diagnosis | ICD-10-CM |
| C90.00 | Multiple myeloma not having achieved remission | Diagnosis | ICD-10-CM |
| C90.01 | Multiple myeloma in remission | Diagnosis | ICD-10-CM |
| C90.02 | Multiple myeloma in relapse | Diagnosis | ICD-10-CM |
| C90.10 | Plasma cell leukemia not having achieved remission | Diagnosis | ICD-10-CM |
| C90.12 | Plasma cell leukemia in relapse | Diagnosis | ICD-10-CM |
| C90.20 | Extramedullary plasmacytoma not having achieved remission | Diagnosis | ICD-10-CM |
| C90.22 | Extramedullary plasmacytoma in relapse | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| C90.30 | Solitary plasmacytoma not having achieved remission | Diagnosis | ICD-10-CM |
| C90.32 | Solitary plasmacytoma in relapse | Diagnosis | ICD-10-CM |
| C9004 | Injection, gemtuzumab ozogamicin, per 5 mg | Procedure | HCPCS |
| C9006 | Injection, tacrolimus, per 5 mg (1 amp) | Procedure | HCPCS |
| C9012 | Injection, arsenic trioxide, per 1 mg/kg | Procedure | HCPCS |
| C9017 | Lomustine, 10 mg | Procedure | HCPCS |
| C9020 | Sirolimus tablet, 1 mg | Procedure | HCPCS |
| C9021 | Injection, obinutuzumab, 10 mg | Procedure | HCPCS |
| C9024 | Injection, liposomal, 1 mg daunorubicin and 2.27 mg cytarabine | Procedure | HCPCS |
| C9029 | Injection, guselkumab, 1 mg | Procedure | HCPCS |
| C9042 | Injection, bendamustine HCl (Belrapzo), 1 mg | Procedure | HCPCS |
| C9044 | Injection, cemiplimab-rwlc, 1 mg | Procedure | HCPCS |
| C9045 | Injection, moxetumomab pasudotox-tdfk, 0.01 mg | Procedure | HCPCS |
| C9049 | Injection, tagraxofusp-erzs, 10 mcg | Procedure | HCPCS |
| C9050 | Injection, emapalumab-lzsg, 1 mg | Procedure | HCPCS |
| C91.00 | Acute lymphoblastic leukemia not having achieved remission | Diagnosis | ICD-10-CM |
| C91.02 | Acute lymphoblastic leukemia, in relapse | Diagnosis | ICD-10-CM |
| C91.10 | Chronic lymphocytic leukemia of B-cell type not having achieved remission | Diagnosis | ICD-10-CM |
| C91.12 | Chronic lymphocytic leukemia of B-cell type in relapse | Diagnosis | ICD-10-CM |
| C91.30 | Prolymphocytic leukemia of B-cell type not having achieved remission | Diagnosis | ICD-10-CM |
| C91.32 | Prolymphocytic leukemia of B-cell type, in relapse | Diagnosis | ICD-10-CM |
| C91.40 | Hairy cell leukemia not having achieved remission | Diagnosis | ICD-10-CM |
| C91.42 | Hairy cell leukemia, in relapse | Diagnosis | ICD-10-CM |
| C91.50 | Adult T-cell lymphoma/leukemia (HTLV-1-associated) not having achieved remission | Diagnosis | ICD-10-CM |
| C91.52 | Adult T-cell lymphoma/leukemia (HTLV-1-associated), in relapse | Diagnosis | ICD-10-CM |
| C91.60 | Prolymphocytic leukemia of T-cell type not having achieved remission | Diagnosis | ICD-10-CM |
| C91.62 | Prolymphocytic leukemia of T-cell type, in relapse | Diagnosis | ICD-10-CM |
| C91.90 | Lymphoid leukemia, unspecified not having achieved remission | Diagnosis | ICD-10-CM |
| C91.92 | Lymphoid leukemia, unspecified, in relapse | Diagnosis | ICD-10-CM |
| C91.A0 | Mature B-cell leukemia Burkitt-type not having achieved remission | Diagnosis | ICD-10-CM |
| C91.A2 | Mature B-cell leukemia Burkitt-type, in relapse | Diagnosis | ICD-10-CM |
| C91.Z0 | Other lymphoid leukemia not having achieved remission | Diagnosis | ICD-10-CM |
| C91.Z2 | Other lymphoid leukemia, in relapse | Diagnosis | ICD-10-CM |
| C9106 | Sirolimus, per 1 mg/ml | Procedure | HCPCS |
| C9110 | Injection, alemtuzumab, per 10 mg/ ml | Procedure | HCPCS |
| C9126 | Injection natalizumab per 5 mg | Procedure | HCPCS |
| C9127 | Injection, paclitaxel protein-bound particles, per 1 mg | Procedure | HCPCS |
| C9129 | Injection, clofarabine, per 1 mg | Procedure | HCPCS |
| C92.00 | Acute myeloblastic leukemia, not having achieved remission | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| C92.02 | Acute myeloblastic leukemia, in relapse | Diagnosis | ICD-10-CM |
| C92.10 | Chronic myeloid leukemia, BCR/ABL-positive, not having achieved remission | Diagnosis | ICD-10-CM |
| C92.12 | Chronic myeloid leukemia, BCR/ABL-positive, in relapse | Diagnosis | ICD-10-CM |
| C92.20 | Atypical chronic myeloid leukemia, BCR/ABL-negative, not having achieved remission | Diagnosis | ICD-10-CM |
| C92.22 | Atypical chronic myeloid leukemia, BCR/ABL-negative, in relapse | Diagnosis | ICD-10-CM |
| C92.30 | Myeloid sarcoma, not having achieved remission | Diagnosis | ICD-10-CM |
| C92.32 | Myeloid sarcoma, in relapse | Diagnosis | ICD-10-CM |
| C92.40 | Acute promyelocytic leukemia, not having achieved remission | Diagnosis | ICD-10-CM |
| C92.42 | Acute promyelocytic leukemia, in relapse | Diagnosis | ICD-10-CM |
| C92.50 | Acute myelomonocytic leukemia, not having achieved remission | Diagnosis | ICD-10-CM |
| C92.52 | Acute myelomonocytic leukemia, in relapse | Diagnosis | ICD-10-CM |
| C92.60 | Acute myeloid leukemia with 11q23-abnormality not having achieved remission | Diagnosis | ICD-10-CM |
| C92.62 | Acute myeloid leukemia with 11q23-abnormality in relapse | Diagnosis | ICD-10-CM |
| C92.90 | Myeloid leukemia, unspecified, not having achieved remission | Diagnosis | ICD-10-CM |
| C92.92 | Myeloid leukemia, unspecified in relapse | Diagnosis | ICD-10-CM |
| C92.A0 | Acute myeloid leukemia with multilineage dysplasia, not having achieved remission | Diagnosis | ICD-10-CM |
| C92.A2 | Acute myeloid leukemia with multilineage dysplasia, in relapse | Diagnosis | ICD-10-CM |
| C92.Z0 | Other myeloid leukemia not having achieved remission | Diagnosis | ICD-10-CM |
| C92.Z2 | Other myeloid leukemia, in relapse | Diagnosis | ICD-10-CM |
| C9205 | Injection, oxaliplatin, per 5 mg | Procedure | HCPCS |
| C9207 | Injection, bortezomib, per 3.5 mg | Procedure | HCPCS |
| C9211 | Injection, alefacept, for intravenous use, per 7.5 mg | Procedure | HCPCS |
| C9212 | Injection, alefacept, for intramuscular use, per 7.5 mg | Procedure | HCPCS |
| C9213 | Injection, pemetrexed, per 10 mg | Procedure | HCPCS |
| C9214 | Injection, bevacizumab, per 10 mg | Procedure | HCPCS |
| C9215 | Injection, cetuximab, per 10 mg | Procedure | HCPCS |
| C9218 | Injection, azacitidine, per 1 mg | Procedure | HCPCS |
| C9230 | Injection, abatacept, per 10 mg | Procedure | HCPCS |
| C9231 | Injection, decitabine, per 1 mg | Procedure | HCPCS |
| C9235 | Injection, panitumumab, 10 mg | Procedure | HCPCS |
| C9236 | Injection, eculizumab, 10 mg | Procedure | HCPCS |
| C9239 | Injection, temsirolimus, 1 mg | Procedure | HCPCS |
| C9240 | Injection, ixabepilone, 1 mg | Procedure | HCPCS |
| C9243 | Injection, bendamustine hcl, 1 mg | Procedure | HCPCS |
| C9249 | Injection, certolizumab pegol, 1 mg | Procedure | HCPCS |
| C9253 | Injection, temozolomide, 1mg | Procedure | HCPCS |
| C9259 | Injection, pralatrexate, 1 mg | Procedure | HCPCS |
| C9260 | Injection, ofatumumab, 10 mg | Procedure | HCPCS |
| C9261 | Injection, ustekinumab, 1 mg | Procedure | HCPCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| C9262 | Fludarabine phosphate, oral, 1 mg | Procedure | HCPCS |
| C9264 | Injection, tocilizumab, 1 mg | Procedure | HCPCS |
| C9265 | Injection, romidepsin, 1 mg | Procedure | HCPCS |
| C9273 | Sipuleucel-T, minimum of 50 million autologous CD54+ cells activated with PAP-GM- | Procedure | HCPCS |
| C9276 | Injection, cabazitaxel, 1 mg | Procedure | HCPCS |
| C9280 | Injection, eribulin mesylate, 1 mg | Procedure | HCPCS |
| C9284 | Injection, ipilimumab, 1 mg | Procedure | HCPCS |
| C9286 | Injection, belatacept, 1 mg | Procedure | HCPCS |
| C9287 | Injection, brentuximab vedotin, 1 mg | Procedure | HCPCS |
| C9289 | Injection, asparaginase Erwinia chrysanthemi, 1,000 IU | Procedure | HCPCS |
| C9292 | Injection, pertuzumab, 10 mg | Procedure | HCPCS |
| C9295 | Injection, carfilzomib, 1 mg | Procedure | HCPCS |
| C9297 | Injection, omacetaxine mepesuccinate, 0.01 mg | Procedure | HCPCS |
| C93.00 | Acute monoblastic/monocytic leukemia, not having achieved remission | Diagnosis | ICD-10-CM |
| C93.02 | Acute monoblastic/monocytic leukemia, in relapse | Diagnosis | ICD-10-CM |
| C93.10 | Chronic myelomonocytic leukemia not having achieved remission | Diagnosis | ICD-10-CM |
| C93.12 | Chronic myelomonocytic leukemia, in relapse | Diagnosis | ICD-10-CM |
| C93.30 | Juvenile myelomonocytic leukemia, not having achieved remission | Diagnosis | ICD-10-CM |
| C93.32 | Juvenile myelomonocytic leukemia, in relapse | Diagnosis | ICD-10-CM |
| C93.90 | Monocytic leukemia, unspecified, not having achieved remission | Diagnosis | ICD-10-CM |
| C93.92 | Monocytic leukemia, unspecified in relapse | Diagnosis | ICD-10-CM |
| C93.Z0 | Other monocytic leukemia, not having achieved remission | Diagnosis | ICD-10-CM |
| C93.Z2 | Other monocytic leukemia, in relapse | Diagnosis | ICD-10-CM |
| C94.00 | Acute erythroid leukemia, not having achieved remission | Diagnosis | ICD-10-CM |
| C94.02 | Acute erythroid leukemia, in relapse | Diagnosis | ICD-10-CM |
| C94.20 | Acute megakaryoblastic leukemia not having achieved remission | Diagnosis | ICD-10-CM |
| C94.22 | Acute megakaryoblastic leukemia, in relapse | Diagnosis | ICD-10-CM |
| C94.30 | Mast cell leukemia not having achieved remission | Diagnosis | ICD-10-CM |
| C94.32 | Mast cell leukemia, in relapse | Diagnosis | ICD-10-CM |
| C94.40 | Acute panmyelosis with myelofibrosis not having achieved remission | Diagnosis | ICD-10-CM |
| C94.42 | Acute panmyelosis with myelofibrosis, in relapse | Diagnosis | ICD-10-CM |
| C94.6 | Myelodysplastic disease, not classified | Diagnosis | ICD-10-CM |
| C94.80 | Other specified leukemias not having achieved remission | Diagnosis | ICD-10-CM |
| C94.82 | Other specified leukemias, in relapse | Diagnosis | ICD-10-CM |
| C9414 | Etoposide; oral, 50 mg, brand name | Procedure | HCPCS |
| C9415 | Doxorubicin HCl, 10 mg, brand name | Procedure | HCPCS |
| C9417 | Bleomycin sulfate, 15 units, brand name | Procedure | HCPCS |
| C9418 | Cisplatin, powder or solution, per 10 mg, brand name | Procedure | HCPCS |
| C9419 | Injection, cladribine, per 1 mg, brand name | Procedure | HCPCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| C9420 | Cyclophosphamide, 100 mg, brand name | Procedure | HCPCS |
| C9421 | Cyclophosphamide, lyophilized, 100 mg, brand name | Procedure | HCPCS |
| C9422 | Cytarabine, 100 mg, brand name | Procedure | HCPCS |
| C9423 | Dacarbazine, 100 mg, brand name | Procedure | HCPCS |
| C9424 | Daunorubicin, 10 mg | Procedure | HCPCS |
| C9425 | Etoposide, 10 mg, brand name | Procedure | HCPCS |
| C9426 | Floxuridine, 500 mg, brand name | Procedure | HCPCS |
| C9427 | Ifosfamide, 1 gm, brand name | Procedure | HCPCS |
| C9429 | Idarubicin HCl, 5 mg, brand name | Procedure | HCPCS |
| C9431 | Paclitaxel, 30 mg, brand name | Procedure | HCPCS |
| C9432 | Mitomycin, 5 mg, brand name | Procedure | HCPCS |
| C9433 | Thiotepa, 15 mg, brand name | Procedure | HCPCS |
| C9436 | Azathioprine, parenteral, brand name, per 100 mg | Procedure | HCPCS |
| C9437 | Carmustine, brand name, 100 mg | Procedure | HCPCS |
| C9438 | Cyclosporine, oral, 100 mg, brand name | Procedure | HCPCS |
| C9440 | Vinorelbine tartrate, brand name, per 10 mg | Procedure | HCPCS |
| C9474 | Injection, irinotecan liposome, 1 mg | Procedure | HCPCS |
| C9487 | Ustekinumab, for intravenous injection, 1 mg | Procedure | HCPCS |
| C95.00 | Acute leukemia of unspecified cell type not having achieved remission | Diagnosis | ICD-10-CM |
| C95.02 | Acute leukemia of unspecified cell type, in relapse | Diagnosis | ICD-10-CM |
| C95.10 | Chronic leukemia of unspecified cell type not having achieved remission | Diagnosis | ICD-10-CM |
| C95.12 | Chronic leukemia of unspecified cell type, in relapse | Diagnosis | ICD-10-CM |
| C95.90 | Leukemia, unspecified not having achieved remission | Diagnosis | ICD-10-CM |
| C95.92 | Leukemia, unspecified, in relapse | Diagnosis | ICD-10-CM |
| C96.20 | Malignant mast cell neoplasm, unspecified | Diagnosis | ICD-10-CM |
| C96.21 | Aggressive systemic mastocytosis | Diagnosis | ICD-10-CM |
| C96.22 | Mast cell sarcoma | Diagnosis | ICD-10-CM |
| C96.29 | Other malignant mast cell neoplasm | Diagnosis | ICD-10-CM |
| C96.4 | Sarcoma of dendritic cells (accessory cells) | Diagnosis | ICD-10-CM |
| C96.6 | Unifocal Langerhans-cell histiocytosis | Diagnosis | ICD-10-CM |
| C96.9 | Malignant neoplasm of lymphoid, hematopoietic and related tissue, unspecified | Diagnosis | ICD-10-CM |
| C96.A | Histiocytic sarcoma | Diagnosis | ICD-10-CM |
| C96.Z | Other specified malignant neoplasms of lymphoid, hematopoietic and related tissue | Diagnosis | ICD-10-CM |
| D37.01 | Neoplasm of uncertain behavior of lip | Diagnosis | ICD-10-CM |
| D37.02 | Neoplasm of uncertain behavior of tongue | Diagnosis | ICD-10-CM |
| D37.030 | Neoplasm of uncertain behavior of the parotid salivary glands | Diagnosis | ICD-10-CM |
| D37.031 | Neoplasm of uncertain behavior of the sublingual salivary glands | Diagnosis | ICD-10-CM |
| D37.032 | Neoplasm of uncertain behavior of the submandibular salivary glands | Diagnosis | ICD-10-CM |
| D37.039 | Neoplasm of uncertain behavior of the major salivary glands, unspecified | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| D37.04 | Neoplasm of uncertain behavior of the minor salivary glands | Diagnosis | ICD-10-CM |
| D37.05 | Neoplasm of uncertain behavior of pharynx | Diagnosis | ICD-10-CM |
| D37.09 | Neoplasm of uncertain behavior of other specified sites of the oral cavity | Diagnosis | ICD-10-CM |
| D37.5 | Neoplasm of uncertain behavior of rectum | Diagnosis | ICD-10-CM |
| D37.6 | Neoplasm of uncertain behavior of liver, gallbladder and bile ducts | Diagnosis | ICD-10-CM |
| D37.8 | Neoplasm of uncertain behavior of other specified digestive organs | Diagnosis | ICD-10-CM |
| D37.9 | Neoplasm of uncertain behavior of digestive organ, unspecified | Diagnosis | ICD-10-CM |
| D38.0 | Neoplasm of uncertain behavior of larynx | Diagnosis | ICD-10-CM |
| D38.1 | Neoplasm of uncertain behavior of trachea, bronchus and lung | Diagnosis | ICD-10-CM |
| D38.2 | Neoplasm of uncertain behavior of pleura | Diagnosis | ICD-10-CM |
| D38.3 | Neoplasm of uncertain behavior of mediastinum | Diagnosis | ICD-10-CM |
| D38.4 | Neoplasm of uncertain behavior of thymus | Diagnosis | ICD-10-CM |
| D38.5 | Neoplasm of uncertain behavior of other respiratory organs | Diagnosis | ICD-10-CM |
| D38.6 | Neoplasm of uncertain behavior of respiratory organ, unspecified | Diagnosis | ICD-10-CM |
| D39.0 | Neoplasm of uncertain behavior of uterus | Diagnosis | ICD-10-CM |
| D39.10 | Neoplasm of uncertain behavior of unspecified ovary | Diagnosis | ICD-10-CM |
| D39.11 | Neoplasm of uncertain behavior of right ovary | Diagnosis | ICD-10-CM |
| D39.12 | Neoplasm of uncertain behavior of left ovary | Diagnosis | ICD-10-CM |
| D39.2 | Neoplasm of uncertain behavior of placenta | Diagnosis | ICD-10-CM |
| D39.8 | Neoplasm of uncertain behavior of other specified female genital organs | Diagnosis | ICD-10-CM |
| D39.9 | Neoplasm of uncertain behavior of female genital organ, unspecified | Diagnosis | ICD-10-CM |
| D40.0 | Neoplasm of uncertain behavior of prostate | Diagnosis | ICD-10-CM |
| D40.10 | Neoplasm of uncertain behavior of unspecified testis | Diagnosis | ICD-10-CM |
| D40.11 | Neoplasm of uncertain behavior of right testis | Diagnosis | ICD-10-CM |
| D40.12 | Neoplasm of uncertain behavior of left testis | Diagnosis | ICD-10-CM |
| D40.8 | Neoplasm of uncertain behavior of other specified male genital organs | Diagnosis | ICD-10-CM |
| D40.9 | Neoplasm of uncertain behavior of male genital organ, unspecified | Diagnosis | ICD-10-CM |
| D41.00 | Neoplasm of uncertain behavior of unspecified kidney | Diagnosis | ICD-10-CM |
| D41.01 | Neoplasm of uncertain behavior of right kidney | Diagnosis | ICD-10-CM |
| D41.02 | Neoplasm of uncertain behavior of left kidney | Diagnosis | ICD-10-CM |
| D41.10 | Neoplasm of uncertain behavior of unspecified renal pelvis | Diagnosis | ICD-10-CM |
| D41.11 | Neoplasm of uncertain behavior of right renal pelvis | Diagnosis | ICD-10-CM |
| D41.12 | Neoplasm of uncertain behavior of left renal pelvis | Diagnosis | ICD-10-CM |
| D41.20 | Neoplasm of uncertain behavior of unspecified ureter | Diagnosis | ICD-10-CM |
| D41.21 | Neoplasm of uncertain behavior of right ureter | Diagnosis | ICD-10-CM |
| D41.22 | Neoplasm of uncertain behavior of left ureter | Diagnosis | ICD-10-CM |
| D41.3 | Neoplasm of uncertain behavior of urethra | Diagnosis | ICD-10-CM |
| D41.4 | Neoplasm of uncertain behavior of bladder | Diagnosis | ICD-10-CM |
| D41.8 | Neoplasm of uncertain behavior of other specified urinary organs | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| D41.9 | Neoplasm of uncertain behavior of unspecified urinary organ | Diagnosis | ICD-10-CM |
| D42.0 | Neoplasm of uncertain behavior of cerebral meninges | Diagnosis | ICD-10-CM |
| D42.1 | Neoplasm of uncertain behavior of spinal meninges | Diagnosis | ICD-10-CM |
| D42.9 | Neoplasm of uncertain behavior of meninges, unspecified | Diagnosis | ICD-10-CM |
| D43.0 | Neoplasm of uncertain behavior of brain, supratentorial | Diagnosis | ICD-10-CM |
| D43.1 | Neoplasm of uncertain behavior of brain, infratentorial | Diagnosis | ICD-10-CM |
| D43.2 | Neoplasm of uncertain behavior of brain, unspecified | Diagnosis | ICD-10-CM |
| D43.3 | Neoplasm of uncertain behavior of cranial nerves | Diagnosis | ICD-10-CM |
| D43.4 | Neoplasm of uncertain behavior of spinal cord | Diagnosis | ICD-10-CM |
| D43.8 | Neoplasm of uncertain behavior of other specified parts of central nervous system | Diagnosis | ICD-10-CM |
| D43.9 | Neoplasm of uncertain behavior of central nervous system, unspecified | Diagnosis | ICD-10-CM |
| D44.0 | Neoplasm of uncertain behavior of thyroid gland | Diagnosis | ICD-10-CM |
| D44.10 | Neoplasm of uncertain behavior of unspecified adrenal gland | Diagnosis | ICD-10-CM |
| D44.11 | Neoplasm of uncertain behavior of right adrenal gland | Diagnosis | ICD-10-CM |
| D44.12 | Neoplasm of uncertain behavior of left adrenal gland | Diagnosis | ICD-10-CM |
| D44.2 | Neoplasm of uncertain behavior of parathyroid gland | Diagnosis | ICD-10-CM |
| D44.3 | Neoplasm of uncertain behavior of pituitary gland | Diagnosis | ICD-10-CM |
| D44.4 | Neoplasm of uncertain behavior of craniopharyngeal duct | Diagnosis | ICD-10-CM |
| D44.5 | Neoplasm of uncertain behavior of pineal gland | Diagnosis | ICD-10-CM |
| D44.6 | Neoplasm of uncertain behavior of carotid body | Diagnosis | ICD-10-CM |
| D44.7 | Neoplasm of uncertain behavior of aortic body and other paraganglia | Diagnosis | ICD-10-CM |
| D44.9 | Neoplasm of uncertain behavior of unspecified endocrine gland | Diagnosis | ICD-10-CM |
| D45 | Polycythemia vera | Diagnosis | ICD-10-CM |
| D46.22 | Refractory anemia with excess of blasts 2 | Diagnosis | ICD-10-CM |
| D47.01 | Cutaneous mastocytosis | Diagnosis | ICD-10-CM |
| D47.02 | Systemic mastocytosis | Diagnosis | ICD-10-CM |
| D47.09 | Other mast cell neoplasms of uncertain behavior | Diagnosis | ICD-10-CM |
| D47.1 | Chronic myeloproliferative disease | Diagnosis | ICD-10-CM |
| D47.4 | Osteomyelofibrosis | Diagnosis | ICD-10-CM |
| D47.9 | Neoplasm of uncertain behavior of lymphoid, hematopoietic and related tissue, | Diagnosis | ICD-10-CM |
| D47.21 | Post-transplant lymphoproliferative disorder (PTLD) | Diagnosis | ICD-10-CM |
| D47.29 | Other specified neoplasms of uncertain behavior of lymphoid, hematopoietic and | Diagnosis | ICD-10-CM |
| D48.0 | Neoplasm of uncertain behavior of bone and articular cartilage | Diagnosis | ICD-10-CM |
| D48.1 | Neoplasm of uncertain behavior of connective and other soft tissue | Diagnosis | ICD-10-CM |
| D48.2 | Neoplasm of uncertain behavior of peripheral nerves and autonomic nervous system | Diagnosis | ICD-10-CM |
| D48.3 | Neoplasm of uncertain behavior of retroperitoneum | Diagnosis | ICD-10-CM |
| D48.4 | Neoplasm of uncertain behavior of peritoneum | Diagnosis | ICD-10-CM |
| D48.5 | Neoplasm of uncertain behavior of skin | Diagnosis | ICD-10-CM |
| D48.60 | Neoplasm of uncertain behavior of unspecified breast | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| D48.61 | Neoplasm of uncertain behavior of right breast | Diagnosis | ICD-10-CM |
| D48.62 | Neoplasm of uncertain behavior of left breast | Diagnosis | ICD-10-CM |
| D48.7 | Neoplasm of uncertain behavior of other specified sites | Diagnosis | ICD-10-CM |
| D48.9 | Neoplasm of uncertain behavior, unspecified | Diagnosis | ICD-10-CM |
| D49.0 | Neoplasm of unspecified behavior of digestive system | Diagnosis | ICD-10-CM |
| D49.1 | Neoplasm of unspecified behavior of respiratory system | Diagnosis | ICD-10-CM |
| D49.2 | Neoplasm of unspecified behavior of bone, soft tissue, and skin | Diagnosis | ICD-10-CM |
| D49.3 | Neoplasm of unspecified behavior of breast | Diagnosis | ICD-10-CM |
| D49.4 | Neoplasm of unspecified behavior of bladder | Diagnosis | ICD-10-CM |
| D49.511 | Neoplasm of unspecified behavior of right kidney | Diagnosis | ICD-10-CM |
| D49.512 | Neoplasm of unspecified behavior of left kidney | Diagnosis | ICD-10-CM |
| D49.519 | Neoplasm of unspecified behavior of unspecified kidney | Diagnosis | ICD-10-CM |
| D49.59 | Neoplasm of unspecified behavior of other genitourinary organ | Diagnosis | ICD-10-CM |
| D49.6 | Neoplasm of unspecified behavior of brain | Diagnosis | ICD-10-CM |
| D49.7 | Neoplasm of unspecified behavior of endocrine glands and other parts of nervous | Diagnosis | ICD-10-CM |
| D49.81 | Neoplasm of unspecified behavior of retina and choroid | Diagnosis | ICD-10-CM |
| D49.89 | Neoplasm of unspecified behavior of other specified sites | Diagnosis | ICD-10-CM |
| D49.9 | Neoplasm of unspecified behavior of unspecified site | Diagnosis | ICD-10-CM |
| D51.0 | Vitamin B12 deficiency anemia due to intrinsic factor deficiency | Diagnosis | ICD-10-CM |
| D57.02 | Hb-SS disease with splenic sequestration | Diagnosis | ICD-10-CM |
| D57.212 | Sickle-cell/Hb-C disease with splenic sequestration | Diagnosis | ICD-10-CM |
| D57.412 | Sickle-cell thalassemia, unspecified, with splenic sequestration | Diagnosis | ICD-10-CM |
| D57.812 | Other sickle-cell disorders with splenic sequestration | Diagnosis | ICD-10-CM |
| D59.0 | Drug-induced autoimmune hemolytic anemia | Diagnosis | ICD-10-CM |
| D59.1 | Other autoimmune hemolytic anemias | Diagnosis | ICD-10-CM |
| D60.0 | Chronic acquired pure red cell aplasia | Diagnosis | ICD-10-CM |
| D60.1 | Transient acquired pure red cell aplasia | Diagnosis | ICD-10-CM |
| D60.8 | Other acquired pure red cell aplasias | Diagnosis | ICD-10-CM |
| D60.9 | Acquired pure red cell aplasia, unspecified | Diagnosis | ICD-10-CM |
| D61.0 | Constitutional aplastic anemia | Diagnosis | ICD-10-CM |
| D61.01 | Constitutional (pure) red blood cell aplasia | Diagnosis | ICD-10-CM |
| D61.09 | Other constitutional aplastic anemia | Diagnosis | ICD-10-CM |
| D61.1 | Drug-induced aplastic anemia | Diagnosis | ICD-10-CM |
| D61.2 | Aplastic anemia due to other external agents | Diagnosis | ICD-10-CM |
| D61.3 | Idiopathic aplastic anemia | Diagnosis | ICD-10-CM |
| D61.810 | Antineoplastic chemotherapy induced pancytopenia | Diagnosis | ICD-10-CM |
| D61.811 | Other drug-induced pancytopenia | Diagnosis | ICD-10-CM |
| D61.818 | Other pancytopenia | Diagnosis | ICD-10-CM |
| D61.82 | Myelophthisis | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| D61.89 | Other specified aplastic anemias and other bone marrow failure syndromes | Diagnosis | ICD-10-CM |
| D61.9 | Aplastic anemia, unspecified | Diagnosis | ICD-10-CM |
| D64.81 | Anemia due to antineoplastic chemotherapy | Diagnosis | ICD-10-CM |
| D69.0 | Allergic purpura | Diagnosis | ICD-10-CM |
| D69.2 | Other nonthrombocytopenic purpura | Diagnosis | ICD-10-CM |
| D69.3 | Immune thrombocytopenic purpura | Diagnosis | ICD-10-CM |
| D69.41 | Evans syndrome | Diagnosis | ICD-10-CM |
| D70.0 | Congenital agranulocytosis | Diagnosis | ICD-10-CM |
| D70.1 | Agranulocytosis secondary to cancer chemotherapy | Diagnosis | ICD-10-CM |
| D70.2 | Other drug-induced agranulocytosis | Diagnosis | ICD-10-CM |
| D70.4 | Cyclic neutropenia | Diagnosis | ICD-10-CM |
| D71 | Functional disorders of polymorphonuclear neutrophils | Diagnosis | ICD-10-CM |
| D72.0 | Genetic anomalies of leukocytes | Diagnosis | ICD-10-CM |
| D75.81 | Myelofibrosis | Diagnosis | ICD-10-CM |
| D76.1 | Hemophagocytic lymphohistiocytosis | Diagnosis | ICD-10-CM |
| D76.2 | Hemophagocytic syndrome, infection-associated | Diagnosis | ICD-10-CM |
| D76.3 | Other histiocytosis syndromes | Diagnosis | ICD-10-CM |
| D80.0 | Hereditary hypogammaglobulinemia | Diagnosis | ICD-10-CM |
| D80.1 | Nonfamilial hypogammaglobulinemia | Diagnosis | ICD-10-CM |
| D80.2 | Selective deficiency of immunoglobulin A [IgA] | Diagnosis | ICD-10-CM |
| D80.3 | Selective deficiency of immunoglobulin G [IgG] subclasses | Diagnosis | ICD-10-CM |
| D80.4 | Selective deficiency of immunoglobulin M [IgM] | Diagnosis | ICD-10-CM |
| D80.5 | Immunodeficiency with increased immunoglobulin M [IgM] | Diagnosis | ICD-10-CM |
| D80.6 | Antibody deficiency with near-normal immunoglobulins or with | Diagnosis | ICD-10-CM |
| D80.8 | Other immunodeficiencies with predominantly antibody defects | Diagnosis | ICD-10-CM |
| D80.9 | Immunodeficiency with predominantly antibody defects, unspecified | Diagnosis | ICD-10-CM |
| D81.0 | Severe combined immunodeficiency [SCID] with reticular dysgenesis | Diagnosis | ICD-10-CM |
| D81.1 | Severe combined immunodeficiency [SCID] with low T- and B-cell numbers | Diagnosis | ICD-10-CM |
| D81.2 | Severe combined immunodeficiency [SCID] with low or normal B-cell numbers | Diagnosis | ICD-10-CM |
| D81.3 | Adenosine deaminase [ADA] deficiency | Diagnosis | ICD-10-CM |
| D81.30 | Adenosine deaminase deficiency, unspecified | Diagnosis | ICD-10-CM |
| D81.31 | Severe combined immunodeficiency due to adenosine deaminase deficiency | Diagnosis | ICD-10-CM |
| D81.32 | Adenosine deaminase 2 deficiency | Diagnosis | ICD-10-CM |
| D81.39 | Other adenosine deaminase deficiency | Diagnosis | ICD-10-CM |
| D81.4 | Nezelof's syndrome | Diagnosis | ICD-10-CM |
| D81.5 | Purine nucleoside phosphorylase [PNP] deficiency | Diagnosis | ICD-10-CM |
| D81.6 | Major histocompatibility complex class I deficiency | Diagnosis | ICD-10-CM |
| D81.7 | Major histocompatibility complex class II deficiency | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| D81.89 | Other combined immunodeficiencies | Diagnosis | ICD-10-CM |
| D81.9 | Combined immunodeficiency, unspecified | Diagnosis | ICD-10-CM |
| D82.0 | Wiskott-Aldrich syndrome | Diagnosis | ICD-10-CM |
| D82.1 | Di George's syndrome | Diagnosis | ICD-10-CM |
| D82.2 | Immunodeficiency with short-limbed stature | Diagnosis | ICD-10-CM |
| D82.3 | Immunodeficiency following hereditary defective response to Epstein-Barr virus | Diagnosis | ICD-10-CM |
| D82.4 | Hyperimmunoglobulin E [IgE] syndrome | Diagnosis | ICD-10-CM |
| D82.8 | Immunodeficiency associated with other specified major defects | Diagnosis | ICD-10-CM |
| D82.9 | Immunodeficiency associated with major defect, unspecified | Diagnosis | ICD-10-CM |
| D83.0 | Common variable immunodeficiency with predominant abnormalities of B-cell | Diagnosis | ICD-10-CM |
| D83.1 | Common variable immunodeficiency with predominant immunoregulatory T-cell | Diagnosis | ICD-10-CM |
| D83.2 | Common variable immunodeficiency with autoantibodies to B- or T-cells | Diagnosis | ICD-10-CM |
| D83.8 | Other common variable immunodeficiencies | Diagnosis | ICD-10-CM |
| D83.9 | Common variable immunodeficiency, unspecified | Diagnosis | ICD-10-CM |
| D84.0 | Lymphocyte function antigen-1 [LFA-1] defect | Diagnosis | ICD-10-CM |
| D84.1 | Defects in the complement system | Diagnosis | ICD-10-CM |
| D84.8 | Other specified immunodeficiencies | Diagnosis | ICD-10-CM |
| D84.9 | Immunodeficiency, unspecified | Diagnosis | ICD-10-CM |
| D86.0 | Sarcoidosis of lung | Diagnosis | ICD-10-CM |
| D86.1 | Sarcoidosis of lymph nodes | Diagnosis | ICD-10-CM |
| D86.2 | Sarcoidosis of lung with sarcoidosis of lymph nodes | Diagnosis | ICD-10-CM |
| D86.3 | Sarcoidosis of skin | Diagnosis | ICD-10-CM |
| D86.81 | Sarcoid meningitis | Diagnosis | ICD-10-CM |
| D86.82 | Multiple cranial nerve palsies in sarcoidosis | Diagnosis | ICD-10-CM |
| D86.83 | Sarcoid iridocyclitis | Diagnosis | ICD-10-CM |
| D86.84 | Sarcoid pyelonephritis | Diagnosis | ICD-10-CM |
| D86.85 | Sarcoid myocarditis | Diagnosis | ICD-10-CM |
| D86.86 | Sarcoid arthropathy | Diagnosis | ICD-10-CM |
| D86.87 | Sarcoid myositis | Diagnosis | ICD-10-CM |
| D86.89 | Sarcoidosis of other sites | Diagnosis | ICD-10-CM |
| D86.9 | Sarcoidosis, unspecified | Diagnosis | ICD-10-CM |
| D89.3 | Immune reconstitution syndrome | Diagnosis | ICD-10-CM |
| D89.810 | Acute graft-versus-host disease | Diagnosis | ICD-10-CM |
| D89.811 | Chronic graft-versus-host disease | Diagnosis | ICD-10-CM |
| D89.812 | Acute on chronic graft-versus-host disease | Diagnosis | ICD-10-CM |
| D89.813 | Graft-versus-host disease, unspecified | Diagnosis | ICD-10-CM |
| D89.82 | Autoimmune lymphoproliferative syndrome [ALPS] | Diagnosis | ICD-10-CM |
| D89.89 | Other specified disorders involving the immune mechanism, not elsewhere classified | Diagnosis | ICD-10-CM |
| D89.9 | Disorder involving the immune mechanism, unspecified | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| E05.00 | Thyrotoxicosis with diffuse goiter without thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.01 | Thyrotoxicosis with diffuse goiter with thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.10 | Thyrotoxicosis with toxic single thyroid nodule without thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.11 | Thyrotoxicosis with toxic single thyroid nodule with thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.20 | Thyrotoxicosis with toxic multinodular goiter without thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.21 | Thyrotoxicosis with toxic multinodular goiter with thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.80 | Other thyrotoxicosis without thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.81 | Other thyrotoxicosis with thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.90 | Thyrotoxicosis, unspecified without thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E05.91 | Thyrotoxicosis, unspecified with thyrotoxic crisis or storm | Diagnosis | ICD-10-CM |
| E06.0 | Acute thyroiditis | Diagnosis | ICD-10-CM |
| E06.1 | Subacute thyroiditis | Diagnosis | ICD-10-CM |
| E06.2 | Chronic thyroiditis with transient thyrotoxicosis | Diagnosis | ICD-10-CM |
| E06.3 | Autoimmune thyroiditis | Diagnosis | ICD-10-CM |
| E06.4 | Drug-induced thyroiditis | Diagnosis | ICD-10-CM |
| E06.5 | Other chronic thyroiditis | Diagnosis | ICD-10-CM |
| E06.9 | Thyroiditis, unspecified | Diagnosis | ICD-10-CM |
| E1500 | Centrifuge, for dialysis | Procedure | HCPCS |
| E1510 | Kidney, dialysate delivery system kidney machine, pump recirculating, air removal system, flowrate meter, power off, heater and temperature control with alarm, IV poles, pressure gauge, concentrate container | Procedure | HCPCS |
| E1520 | Heparin infusion pump for hemodialysis | Procedure | HCPCS |
| E1530 | Air bubble detector for hemodialysis, each, replacement | Procedure | HCPCS |
| E1540 | Pressure alarm for hemodialysis, each, replacement | Procedure | HCPCS |
| E1550 | Bath conductivity meter for hemodialysis, each | Procedure | HCPCS |
| E1560 | Blood leak detector for hemodialysis, each, replacement | Procedure | HCPCS |
| E1570 | Adjustable chair, for ESRD patients | Procedure | HCPCS |
| E1575 | Transducer protectors/fluid barriers, for hemodialysis, any size, per 10 | Procedure | HCPCS |
| E1580 | Unipuncture control system for hemodialysis | Procedure | HCPCS |
| E1590 | Hemodialysis machine | Procedure | HCPCS |
| E1592 | Automatic intermittent peritoneal dialysis system | Procedure | HCPCS |
| E1594 | Cycler dialysis machine for peritoneal dialysis | Procedure | HCPCS |
| E1600 | Delivery and/or installation charges for hemodialysis equipment | Procedure | HCPCS |
| E1610 | Reverse osmosis water purification system, for hemodialysis | Procedure | HCPCS |
| E1615 | Deionizer water purification system, for hemodialysis | Procedure | HCPCS |
| E1620 | Blood pump for hemodialysis, replacement | Procedure | HCPCS |
| E1625 | Water softening system, for hemodialysis | Procedure | HCPCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| E1630 | Reciprocating peritoneal dialysis system | Procedure | HCPCS |
| E1632 | Wearable artificial kidney, each | Procedure | HCPCS |
| E1634 | Peritoneal dialysis clamps, each | Procedure | HCPCS |
| E1635 | Compact (portable) travel hemodialyzer system | Procedure | HCPCS |
| E1636 | Sorbent cartridges, for hemodialysis, per 10 | Procedure | HCPCS |
| E27.1 | Primary adrenocortical insufficiency | Diagnosis | ICD-10-CM |
| E27.2 | Addisonian crisis | Diagnosis | ICD-10-CM |
| E40 | Kwashiorkor | Diagnosis | ICD-10-CM |
| E41 | Nutritional marasmus | Diagnosis | ICD-10-CM |
| E42 | Marasmic kwashiorkor | Diagnosis | ICD-10-CM |
| E43 | Unspecified severe protein-calorie malnutrition | Diagnosis | ICD-10-CM |
| E80.3 | Defects of catalase and peroxidase | Diagnosis | ICD-10-CM |
| E85.0 | Non-neuropathic heredofamilial amyloidosis | Diagnosis | ICD-10-CM |
| E85.1 | Neuropathic heredofamilial amyloidosis | Diagnosis | ICD-10-CM |
| E85.2 | Heredofamilial amyloidosis, unspecified | Diagnosis | ICD-10-CM |
| E85.3 | Secondary systemic amyloidosis | Diagnosis | ICD-10-CM |
| E85.4 | Organ-limited amyloidosis | Diagnosis | ICD-10-CM |
| E85.81 | Light chain (AL) amyloidosis | Diagnosis | ICD-10-CM |
| E85.82 | Wild-type transthyretin-related (ATTR) amyloidosis | Diagnosis | ICD-10-CM |
| E85.89 | Other amyloidosis | Diagnosis | ICD-10-CM |
| E85.9 | Amyloidosis, unspecified | Diagnosis | ICD-10-CM |
| G0498 | Chemotherapy administration, intravenous infusion technique; initiation of infusion in the office/clinic setting using office/clinic pump/supplies, with continuation of the infusion in the community setting (e.g., home, domiciliary, rest home or assisted living) using a portable pump provided by the office/clinic, includes follow up office/clinic visit at the conclusion of the infusion | Procedure | HCPCS |
| G3001 | Administration and supply of tositumomab, 450 mg | Procedure | HCPCS |
| G35 | Multiple sclerosis | Diagnosis | ICD-10-CM |
| G36.0 | Neuromyelitis optica [Devic] | Diagnosis | ICD-10-CM |
| G37.0 | Diffuse sclerosis of central nervous system | Diagnosis | ICD-10-CM |
| G37.1 | Central demyelination of corpus callosum | Diagnosis | ICD-10-CM |
| G37.2 | Central pontine myelinolysis | Diagnosis | ICD-10-CM |
| G37.3 | Acute transverse myelitis in demyelinating disease of central nervous system | Diagnosis | ICD-10-CM |
| G37.4 | Subacute necrotizing myelitis of central nervous system | Diagnosis | ICD-10-CM |
| G37.5 | Concentric sclerosis [Balo] of central nervous system | Diagnosis | ICD-10-CM |
| G37.8 | Other specified demyelinating diseases of central nervous system | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| G61.81 | Chronic inflammatory demyelinating polyneuritis | Diagnosis | ICD-10-CM |
| G61.82 | Multifocal motor neuropathy | Diagnosis | ICD-10-CM |
| G61.89 | Other inflammatory polyneuropathies | Diagnosis | ICD-10-CM |
| G61.9 | Inflammatory polyneuropathy, unspecified | Diagnosis | ICD-10-CM |
| G62.2 | Polyneuropathy due to other toxic agents | Diagnosis | ICD-10-CM |
| G62.81 | Critical illness polyneuropathy | Diagnosis | ICD-10-CM |
| G63 | Polyneuropathy in diseases classified elsewhere | Diagnosis | ICD-10-CM |
| G70.00 | Myasthenia gravis without (acute) exacerbation | Diagnosis | ICD-10-CM |
| G70.01 | Myasthenia gravis with (acute) exacerbation | Diagnosis | ICD-10-CM |
| G70.80 | Lambert-Eaton syndrome, unspecified | Diagnosis | ICD-10-CM |
| G70.81 | Lambert-Eaton syndrome in disease classified elsewhere | Diagnosis | ICD-10-CM |
| G72.41 | Inclusion body myositis [IBM] | Diagnosis | ICD-10-CM |
| G72.49 | Other inflammatory and immune myopathies, not elsewhere classified | Diagnosis | ICD-10-CM |
| G9835 | Trastuzumab administered within 12 months of diagnosis | Procedure | HCPCS |
| G9837 | Trastuzumab not administered within 12 months of diagnosis | Procedure | HCPCS |
| I12.0 | Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease | Diagnosis | ICD-10-CM |
| I13.11 | Hypertensive heart and chronic kidney disease without heart failure, with stage 5 chronic kidney disease, or end stage renal disease | Diagnosis | ICD-10-CM |
| I13.2 | Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease | Diagnosis | ICD-10-CM |
| I25.750 | Atherosclerosis of native coronary artery of transplanted heart with unstable angina | Diagnosis | ICD-10-CM |
| I25.751 | Atherosclerosis of native coronary artery of transplanted heart with angina pectoris with documented spasm | Diagnosis | ICD-10-CM |
| I25.758 | Atherosclerosis of native coronary artery of transplanted heart with other forms of angina pectoris | Diagnosis | ICD-10-CM |
| I25.759 | Atherosclerosis of native coronary artery of transplanted heart with unspecified angina pectoris | Diagnosis | ICD-10-CM |
| I25.760 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with unstable angina | Diagnosis | ICD-10-CM |
| I25.761 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with angina pectoris with documented spasm | Diagnosis | ICD-10-CM |
| I25.768 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with other forms of angina pectoris | Diagnosis | ICD-10-CM |
| I25.769 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with unspecified angina pectoris | Diagnosis | ICD-10-CM |
| I25.811 | Atherosclerosis of native coronary artery of transplanted heart without angina pectoris | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| I25.812 | Atherosclerosis of bypass graft of coronary artery of transplanted heart without angina pectoris | Diagnosis | ICD-10-CM |
| I40.8 | Other acute myocarditis | Diagnosis | ICD-10-CM |
| I40.9 | Acute myocarditis, unspecified | Diagnosis | ICD-10-CM |
| I41 | Myocarditis in diseases classified elsewhere | Diagnosis | ICD-10-CM |
| I73.1 | Thromboangiitis obliterans [Buerger's disease] | Diagnosis | ICD-10-CM |
| I77.6 | Arteritis, unspecified | Diagnosis | ICD-10-CM |
| I85.00 | Esophageal varices without bleeding | Diagnosis | ICD-10-CM |
| I85.01 | Esophageal varices with bleeding | Diagnosis | ICD-10-CM |
| I85.10 | Secondary esophageal varices without bleeding | Diagnosis | ICD-10-CM |
| I85.11 | Secondary esophageal varices with bleeding | Diagnosis | ICD-10-CM |
| J0129 | Injection, abatacept, 10 mg (code may be used for Medicare when drug administered under the direct supervision of a physician, not for use when drug is self-administered) | Procedure | HCPCS |
| J0135 | Injection, adalimumab, 20 mg | Procedure | HCPCS |
| J0202 | Injection, alemtuzumab, 1 mg | Procedure | HCPCS |
| J0207 | Injection, amifostine, 500 mg | Procedure | HCPCS |
| J0215 | Injection, alefacept, 0.5 mg | Procedure | HCPCS |
| J0480 | Injection, basiliximab, 20 mg | Procedure | HCPCS |
| J0485 | Injection, belatacept, 1 mg | Procedure | HCPCS |
| J0490 | Injection, belimumab, 10 mg | Procedure | HCPCS |
| J0593 | Injection, lanadelumab-flyo, 1 mg (code may be used for Medicare when drug administered under direct supervision of a physician, not for use when drug is self-administered) | Procedure | HCPCS |
| J0594 | Injection, busulfan, 1 mg | Procedure | HCPCS |
| J0638 | Injection, canakinumab, 1 mg | Procedure | HCPCS |
| J0717 | Injection, certolizumab pegol, 1 mg (code may be used for Medicare when drug administered under the direct supervision of a physician, not for use when drug is self-administered) | Procedure | HCPCS |
| J0718 | Injection, certolizumab pegol, 1 mg | Procedure | HCPCS |
| J0894 | Injection, decitabine, 1 mg | Procedure | HCPCS |
| J0897 | Injection, denosumab, 1 mg | Procedure | HCPCS |
| J1300 | Injection, eculizumab, 10 mg | Procedure | HCPCS |
| J1303 | Injection, ravulizumab-cwvz, 10 mg | Procedure | HCPCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------|--|---------------|-----------|
| J1438 | Injection, etanercept, 25 mg (code may be used for Medicare when drug administered under the direct supervision of a physician, not for use when drug is self-administered) | Procedure | HCPCS |
| J1595 | Injection, glatiramer acetate, 20 mg | Procedure | HCPCS |
| J1600 | Injection, gold sodium thiomalate, up to 50 mg | Procedure | HCPCS |
| J1602 | Injection, golimumab, 1 mg, for intravenous use | Procedure | HCPCS |
| J1628 | Injection, guselkumab, 1 mg | Procedure | HCPCS |
| J1745 | Injection, infliximab, excludes biosimilar, 10 mg | Procedure | HCPCS |
| J1825 | Injection, interferon beta-1a, 33 mcg | Procedure | HCPCS |
| J1826 | Injection, interferon beta-1a, 30 mcg | Procedure | HCPCS |
| J1830 | Injection interferon beta-1b, 0.25 mg (code may be used for Medicare when drug administered under the direct supervision of a physician, not for use when drug is self-administered) | Procedure | HCPCS |
| J2323 | Injection, natalizumab, 1 mg | Procedure | HCPCS |
| J2350 | Injection, ocrelizumab, 1 mg | Procedure | HCPCS |
| J2504 | Injection, pegademase bovine, 25 IU | Procedure | HCPCS |
| J2793 | Injection, riloncept, 1 mg | Procedure | HCPCS |
| J2860 | Injection, siltuximab, 10 mg | Procedure | HCPCS |
| J2910 | Injection, aurothioglucose, up to 50 mg | Procedure | HCPCS |
| J3031 | Injection, fremanezumab-vfrm, 1 mg (code may be used for Medicare when drug administered under the direct supervision of a physician, not for use when drug is self-administered) | Procedure | HCPCS |
| J3111 | Injection, romosozumab-aqqg, 1 mg | Procedure | HCPCS |
| J3245 | Injection, tildrakizumab, 1 mg | Procedure | HCPCS |
| J3262 | Injection, tocilizumab, 1 mg | Procedure | HCPCS |
| J3357 | Ustekinumab, for subcutaneous injection, 1 mg | Procedure | HCPCS |
| J3358 | Ustekinumab, for intravenous injection, 1 mg | Procedure | HCPCS |
| J3380 | Injection, vedolizumab, 1 mg | Procedure | HCPCS |
| J67.9 | Hypersensitivity pneumonitis due to unspecified organic dust | Diagnosis | ICD-10-CM |
| J7500 | Azathioprine, oral, 50 mg | Procedure | HCPCS |
| J7501 | Azathioprine, parenteral, 100 mg | Procedure | HCPCS |
| J7502 | Cyclosporine, oral, 100 mg | Procedure | HCPCS |
| J7503 | Tacrolimus, extended release, (Envarsus XR), oral, 0.25 mg | Procedure | HCPCS |
| J7505 | Muromonab-CD3, parenteral, 5 mg | Procedure | HCPCS |
| J7507 | Tacrolimus, immediate release, oral, 1 mg | Procedure | HCPCS |
| J7508 | Tacrolimus, extended release, (Astagraf XL), oral, 0.1 mg | Procedure | HCPCS |
| J7509 | Methylprednisolone, oral, per 4 mg | Procedure | HCPCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| J7510 | Prednisolone, oral, per 5 mg | Procedure | HCPCS |
| J7512 | Prednisone, immediate release or delayed release, oral, 1 mg | Procedure | HCPCS |
| J7513 | Daclizumab, parenteral, 25 mg | Procedure | HCPCS |
| J7515 | Cyclosporine, oral, 25 mg | Procedure | HCPCS |
| J7516 | Cyclosporine, parenteral, 250 mg | Procedure | HCPCS |
| J7517 | Mycophenolate mofetil, oral, 250 mg | Procedure | HCPCS |
| J7520 | Sirolimus, oral, 1 mg | Procedure | HCPCS |
| J7525 | Tacrolimus, parenteral, 5 mg | Procedure | HCPCS |
| J7527 | Everolimus, oral, 0.25 mg | Procedure | HCPCS |
| J7599 | Immunosuppressive drug, not otherwise classified | Procedure | HCPCS |
| J84.01 | Alveolar proteinosis | Diagnosis | ICD-10-CM |
| J84.02 | Pulmonary alveolar microlithiasis | Diagnosis | ICD-10-CM |
| J84.09 | Other alveolar and parieto-alveolar conditions | Diagnosis | ICD-10-CM |
| J84.111 | Idiopathic interstitial pneumonia, not otherwise specified | Diagnosis | ICD-10-CM |
| J84.112 | Idiopathic pulmonary fibrosis | Diagnosis | ICD-10-CM |
| J84.113 | Idiopathic non-specific interstitial pneumonitis | Diagnosis | ICD-10-CM |
| J84.114 | Acute interstitial pneumonitis | Diagnosis | ICD-10-CM |
| J84.115 | Respiratory bronchiolitis interstitial lung disease | Diagnosis | ICD-10-CM |
| J84.116 | Cryptogenic organizing pneumonia | Diagnosis | ICD-10-CM |
| J84.117 | Desquamative interstitial pneumonia | Diagnosis | ICD-10-CM |
| J84.2 | Lymphoid interstitial pneumonia | Diagnosis | ICD-10-CM |
| J84.81 | Lymphangioleiomyomatosis | Diagnosis | ICD-10-CM |
| J84.82 | Adult pulmonary Langerhans cell histiocytosis | Diagnosis | ICD-10-CM |
| J84.83 | Surfactant mutations of the lung | Diagnosis | ICD-10-CM |
| J84.841 | Neuroendocrine cell hyperplasia of infancy | Diagnosis | ICD-10-CM |
| J84.842 | Pulmonary interstitial glycogenosis | Diagnosis | ICD-10-CM |
| J84.843 | Alveolar capillary dysplasia with vein misalignment | Diagnosis | ICD-10-CM |
| J84.848 | Other interstitial lung diseases of childhood | Diagnosis | ICD-10-CM |
| J8510 | Busulfan, oral, 2 mg | Procedure | HCPCS |
| J8520 | Capecitabine, oral, 150 mg | Procedure | HCPCS |
| J8521 | Capecitabine, oral, 500 mg | Procedure | HCPCS |
| J8530 | Cyclophosphamide, oral, 25 mg | Procedure | HCPCS |
| J8540 | Dexamethasone, oral, 0.25 mg | Procedure | HCPCS |
| J8560 | Etoposide, oral, 50 mg | Procedure | HCPCS |
| J8561 | Everolimus, oral, 0.25 mg | Procedure | HCPCS |
| J8562 | Fludarabine phosphate, oral, 10 mg | Procedure | HCPCS |
| J8565 | Gefitinib, oral, 250 mg | Procedure | HCPCS |
| J8600 | Melphalan, oral, 2 mg | Procedure | HCPCS |
| J8610 | Methotrexate, oral, 2.5 mg | Procedure | HCPCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------|--|---------------|-----------|
| J8700 | Temozolomide, oral, 5 mg | Procedure | HCPCS |
| J8705 | Topotecan, oral, 0.25 mg | Procedure | HCPCS |
| J8999 | Prescription drug, oral, chemotherapeutic, NOS | Procedure | HCPCS |
| J9000 | Injection, doxorubicin HCl, 10 mg | Procedure | HCPCS |
| J9001 | Injection, doxorubicin HCl, all lipid formulations, 10 mg | Procedure | HCPCS |
| J9002 | Injection, doxorubicin hydrochloride, liposomal, Doxil, 10 mg | Procedure | HCPCS |
| J9010 | Injection, alemtuzumab, 10 mg | Procedure | HCPCS |
| J9015 | Injection, aldesleukin, per single use vial | Procedure | HCPCS |
| J9017 | Injection, arsenic trioxide, 1 mg | Procedure | HCPCS |
| J9019 | Injection, asparaginase (Erwinaze), 1,000 IU | Procedure | HCPCS |
| J9020 | Injection, asparaginase, not otherwise specified, 10,000 units | Procedure | HCPCS |
| J9025 | Injection, azacitidine, 1 mg | Procedure | HCPCS |
| J9027 | Injection, clofarabine, 1 mg | Procedure | HCPCS |
| J9033 | Injection, bendamustine HCl (Treanda), 1 mg | Procedure | HCPCS |
| J9034 | Injection, bendamustine HCl (Bendeka), 1 mg | Procedure | HCPCS |
| J9035 | Injection, bevacizumab, 10 mg | Procedure | HCPCS |
| J9036 | Injection, bendamustine hydrochloride, (Belrapzo/bendamustine), 1 mg | Procedure | HCPCS |
| J9040 | Injection, bleomycin sulfate, 15 units | Procedure | HCPCS |
| J9041 | Injection, bortezomib (Velcade), 0.1 mg | Procedure | HCPCS |
| J9042 | Injection, brentuximab vedotin, 1 mg | Procedure | HCPCS |
| J9043 | Injection, cabazitaxel, 1 mg | Procedure | HCPCS |
| J9045 | Injection, carboplatin, 50 mg | Procedure | HCPCS |
| J9047 | Injection, carfilzomib, 1 mg | Procedure | HCPCS |
| J9050 | Injection, carmustine, 100 mg | Procedure | HCPCS |
| J9055 | Injection, cetuximab, 10 mg | Procedure | HCPCS |
| J9057 | Injection, copanlisib, 1 mg | Procedure | HCPCS |
| J9060 | Injection, cisplatin, powder or solution, 10 mg | Procedure | HCPCS |
| J9062 | Cisplatin, 50 mg | Procedure | HCPCS |
| J9065 | Injection, cladribine, per 1 mg | Procedure | HCPCS |
| J9070 | Cyclophosphamide, 100 mg | Procedure | HCPCS |
| J9080 | Cyclophosphamide, 200 mg | Procedure | HCPCS |
| J9090 | Cyclophosphamide, 500 mg | Procedure | HCPCS |
| J9091 | Cyclophosphamide, 1 g | Procedure | HCPCS |
| J9092 | Cyclophosphamide, 2 g | Procedure | HCPCS |
| J9093 | Cyclophosphamide, lyophilized, 100 mg | Procedure | HCPCS |
| J9094 | Cyclophosphamide, lyophilized, 200 mg | Procedure | HCPCS |
| J9095 | Cyclophosphamide, lyophilized, 500 mg | Procedure | HCPCS |
| J9096 | Cyclophosphamide, lyophilized, 1 g | Procedure | HCPCS |
| J9097 | Cyclophosphamide, lyophilized, 2 g | Procedure | HCPCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------|---|---------------|-----------|
| J9098 | Injection, cytarabine liposome, 10 mg | Procedure | HCPCS |
| J9100 | Injection, cytarabine, 100 mg | Procedure | HCPCS |
| J9110 | Injection, cytarabine, 500 mg | Procedure | HCPCS |
| J9118 | Injection, calaspargase pegol-mknl, 10 units | Procedure | HCPCS |
| J9119 | Injection, cemiplimab-rwlc, 1 mg | Procedure | HCPCS |
| J9120 | Injection, dactinomycin, 0.5 mg | Procedure | HCPCS |
| J9130 | Dacarbazine, 100 mg | Procedure | HCPCS |
| J9140 | Dacarbazine, 200 mg | Procedure | HCPCS |
| J9150 | Injection, daunorubicin, 10 mg | Procedure | HCPCS |
| J9151 | Injection, daunorubicin citrate, liposomal formulation, 10 mg | Procedure | HCPCS |
| J9153 | Injection, liposomal, 1 mg daunorubicin and 2.27 mg cytarabine | Procedure | HCPCS |
| J9160 | Injection, denileukin diftitox, 300 mcg | Procedure | HCPCS |
| J9170 | Injection, docetaxel, 20 mg | Procedure | HCPCS |
| J9171 | Injection, docetaxel, 1 mg | Procedure | HCPCS |
| J9173 | Injection, durvalumab, 10 mg | Procedure | HCPCS |
| J9178 | Injection, epirubicin HCl, 2 mg | Procedure | HCPCS |
| J9179 | Injection, eribulin mesylate, 0.1 mg | Procedure | HCPCS |
| J9180 | Epirubicin HCl, 50 mg | Procedure | HCPCS |
| J9181 | Injection, etoposide, 10 mg | Procedure | HCPCS |
| J9182 | Etoposide, 100 mg | Procedure | HCPCS |
| J9185 | Injection, fludarabine phosphate, 50 mg | Procedure | HCPCS |
| J9190 | Injection, fluorouracil, 500 mg | Procedure | HCPCS |
| J9200 | Injection, floxuridine, 500 mg | Procedure | HCPCS |
| J9201 | Injection, gemcitabine HCl, not otherwise specified, 200 mg | Procedure | HCPCS |
| J9203 | Injection, gemtuzumab ozogamicin, 0.1 mg | Procedure | HCPCS |
| J9204 | Injection, mogamulizumab-kpkc, 1 mg | Procedure | HCPCS |
| J9205 | Injection, irinotecan liposome, 1 mg | Procedure | HCPCS |
| J9206 | Injection, irinotecan, 20 mg | Procedure | HCPCS |
| J9207 | Injection, ixabepilone, 1 mg | Procedure | HCPCS |
| J9208 | Injection, ifosfamide, 1 g | Procedure | HCPCS |
| J9210 | Injection, emapalumab-lzsg, 1 mg | Procedure | HCPCS |
| J9211 | Injection, idarubicin HCl, 5 mg | Procedure | HCPCS |
| J9212 | Injection, interferon alfacon-1, recombinant, 1 mcg | Procedure | HCPCS |
| J9213 | Injection, interferon, alfa-2a, recombinant, 3 million units | Procedure | HCPCS |
| J9214 | Injection, interferon, alfa-2b, recombinant, 1 million units | Procedure | HCPCS |
| J9215 | Injection, interferon, alfa-N3, (human leukocyte derived), 250,000 IU | Procedure | HCPCS |
| J9216 | Injection, interferon, gamma 1-b, 3 million units | Procedure | HCPCS |
| J9228 | Injection, ipilimumab, 1 mg | Procedure | HCPCS |
| J9229 | Injection, inotuzumab ozogamicin, 0.1 mg | Procedure | HCPCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------|--|---------------|-----------|
| J9230 | Injection, mechlorethamine HCl, (nitrogen mustard), 10 mg | Procedure | HCPCS |
| J9245 | Injection, melphalan hydrochloride, not otherwise specified, 50 mg | Procedure | HCPCS |
| J9250 | Methotrexate sodium, 5 mg | Procedure | HCPCS |
| J9260 | Methotrexate sodium, 50 mg | Procedure | HCPCS |
| J9261 | Injection, nelarabine, 50 mg | Procedure | HCPCS |
| J9262 | Injection, omacetaxine mepesuccinate, 0.01 mg | Procedure | HCPCS |
| J9263 | Injection, oxaliplatin, 0.5 mg | Procedure | HCPCS |
| J9264 | Injection, paclitaxel protein-bound particles, 1 mg | Procedure | HCPCS |
| J9265 | Injection, paclitaxel, 30 mg | Procedure | HCPCS |
| J9266 | Injection, pegaspargase, per single dose vial | Procedure | HCPCS |
| J9267 | Injection, paclitaxel, 1 mg | Procedure | HCPCS |
| J9268 | Injection, pentostatin, 10 mg | Procedure | HCPCS |
| J9269 | Injection, tagraxofusp-erzs, 10 mcg | Procedure | HCPCS |
| J9270 | Injection, plicamycin, 2.5 mg | Procedure | HCPCS |
| J9271 | Injection, pembrolizumab, 1 mg | Procedure | HCPCS |
| J9280 | Injection, mitomycin, 5 mg | Procedure | HCPCS |
| J9290 | Mitomycin, 20 mg | Procedure | HCPCS |
| J9291 | Mitomycin, 40 mg | Procedure | HCPCS |
| J9293 | Injection, mitoxantrone HCl, per 5 mg | Procedure | HCPCS |
| J9300 | Injection, gemtuzumab ozogamicin, 5 mg | Procedure | HCPCS |
| J9301 | Injection, obinutuzumab, 10 mg | Procedure | HCPCS |
| J9302 | Injection, ofatumumab, 10 mg | Procedure | HCPCS |
| J9303 | Injection, panitumumab, 10 mg | Procedure | HCPCS |
| J9305 | Injection, pemetrexed, NOS, 10 mg | Procedure | HCPCS |
| J9306 | Injection, pertuzumab, 1 mg | Procedure | HCPCS |
| J9307 | Injection, pralatrexate, 1 mg | Procedure | HCPCS |
| J9310 | Injection, rituximab, 100 mg | Procedure | HCPCS |
| J9311 | Injection, rituximab 10 mg and hyaluronidase | Procedure | HCPCS |
| J9312 | Injection, rituximab, 10 mg | Procedure | HCPCS |
| J9315 | Injection, romidepsin, 1 mg | Procedure | HCPCS |
| J9320 | Injection, streptozocin, 1 g | Procedure | HCPCS |
| J9328 | Injection, temozolomide, 1 mg | Procedure | HCPCS |
| J9330 | Injection, temsirolimus, 1 mg | Procedure | HCPCS |
| J9340 | Injection, thiotepa, 15 mg | Procedure | HCPCS |
| J9350 | Injection, topotecan, 4 mg | Procedure | HCPCS |
| J9351 | Injection, topotecan, 0.1 mg | Procedure | HCPCS |
| J9355 | Injection, trastuzumab, excludes biosimilar, 10 mg | Procedure | HCPCS |
| J9356 | Injection, trastuzumab, 10 mg and hyaluronidase-oysk | Procedure | HCPCS |
| J9360 | Injection, vinblastine sulfate, 1 mg | Procedure | HCPCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| J9370 | Vincristine sulfate, 1 mg | Procedure | HCPCS |
| J9371 | Injection, vincristine sulfate liposome, 1 mg | Procedure | HCPCS |
| J9375 | Vincristine sulfate, 2 mg | Procedure | HCPCS |
| J9380 | Vincristine sulfate, 5 mg | Procedure | HCPCS |
| J9390 | Injection, vinorelbine tartrate, 10 mg | Procedure | HCPCS |
| J9999 | Not otherwise classified, antineoplastic drugs | Procedure | HCPCS |
| K0119 | Azathioprine, oral, tab, 50 mg | Procedure | HCPCS |
| K0120 | Azathioprine, parenteral, 100 mg | Procedure | HCPCS |
| K0122 | Cyclosporine, parenteral, 250 mg | Procedure | HCPCS |
| K0412 | Mycophenolate mofetil, oral, 250 mg (CellCept) | Procedure | HCPCS |
| K50.00 | Crohn's disease of small intestine without complications | Diagnosis | ICD-10-CM |
| K50.011 | Crohn's disease of small intestine with rectal bleeding | Diagnosis | ICD-10-CM |
| K50.012 | Crohn's disease of small intestine with intestinal obstruction | Diagnosis | ICD-10-CM |
| K50.013 | Crohn's disease of small intestine with fistula | Diagnosis | ICD-10-CM |
| K50.014 | Crohn's disease of small intestine with abscess | Diagnosis | ICD-10-CM |
| K50.018 | Crohn's disease of small intestine with other complication | Diagnosis | ICD-10-CM |
| K50.019 | Crohn's disease of small intestine with unspecified complications | Diagnosis | ICD-10-CM |
| K50.10 | Crohn's disease of large intestine without complications | Diagnosis | ICD-10-CM |
| K50.111 | Crohn's disease of large intestine with rectal bleeding | Diagnosis | ICD-10-CM |
| K50.112 | Crohn's disease of large intestine with intestinal obstruction | Diagnosis | ICD-10-CM |
| K50.113 | Crohn's disease of large intestine with fistula | Diagnosis | ICD-10-CM |
| K50.114 | Crohn's disease of large intestine with abscess | Diagnosis | ICD-10-CM |
| K50.118 | Crohn's disease of large intestine with other complication | Diagnosis | ICD-10-CM |
| K50.119 | Crohn's disease of large intestine with unspecified complications | Diagnosis | ICD-10-CM |
| K50.80 | Crohn's disease of both small and large intestine without complications | Diagnosis | ICD-10-CM |
| K50.811 | Crohn's disease of both small and large intestine with rectal bleeding | Diagnosis | ICD-10-CM |
| K50.812 | Crohn's disease of both small and large intestine with intestinal obstruction | Diagnosis | ICD-10-CM |
| K50.813 | Crohn's disease of both small and large intestine with fistula | Diagnosis | ICD-10-CM |
| K50.814 | Crohn's disease of both small and large intestine with abscess | Diagnosis | ICD-10-CM |
| K50.818 | Crohn's disease of both small and large intestine with other complication | Diagnosis | ICD-10-CM |
| K50.819 | Crohn's disease of both small and large intestine with unspecified complications | Diagnosis | ICD-10-CM |
| K50.90 | Crohn's disease, unspecified, without complications | Diagnosis | ICD-10-CM |
| K50.911 | Crohn's disease, unspecified, with rectal bleeding | Diagnosis | ICD-10-CM |
| K50.912 | Crohn's disease, unspecified, with intestinal obstruction | Diagnosis | ICD-10-CM |
| K50.913 | Crohn's disease, unspecified, with fistula | Diagnosis | ICD-10-CM |
| K50.914 | Crohn's disease, unspecified, with abscess | Diagnosis | ICD-10-CM |
| K50.918 | Crohn's disease, unspecified, with other complication | Diagnosis | ICD-10-CM |
| K50.919 | Crohn's disease, unspecified, with unspecified complications | Diagnosis | ICD-10-CM |
| K51.00 | Ulcerative (chronic) pancolitis without complications | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| K51.011 | Ulcerative (chronic) pancolitis with rectal bleeding | Diagnosis | ICD-10-CM |
| K51.012 | Ulcerative (chronic) pancolitis with intestinal obstruction | Diagnosis | ICD-10-CM |
| K51.013 | Ulcerative (chronic) pancolitis with fistula | Diagnosis | ICD-10-CM |
| K51.014 | Ulcerative (chronic) pancolitis with abscess | Diagnosis | ICD-10-CM |
| K51.018 | Ulcerative (chronic) pancolitis with other complication | Diagnosis | ICD-10-CM |
| K51.019 | Ulcerative (chronic) pancolitis with unspecified complications | Diagnosis | ICD-10-CM |
| K51.20 | Ulcerative (chronic) proctitis without complications | Diagnosis | ICD-10-CM |
| K51.211 | Ulcerative (chronic) proctitis with rectal bleeding | Diagnosis | ICD-10-CM |
| K51.212 | Ulcerative (chronic) proctitis with intestinal obstruction | Diagnosis | ICD-10-CM |
| K51.213 | Ulcerative (chronic) proctitis with fistula | Diagnosis | ICD-10-CM |
| K51.214 | Ulcerative (chronic) proctitis with abscess | Diagnosis | ICD-10-CM |
| K51.218 | Ulcerative (chronic) proctitis with other complication | Diagnosis | ICD-10-CM |
| K51.219 | Ulcerative (chronic) proctitis with unspecified complications | Diagnosis | ICD-10-CM |
| K51.30 | Ulcerative (chronic) rectosigmoiditis without complications | Diagnosis | ICD-10-CM |
| K51.311 | Ulcerative (chronic) rectosigmoiditis with rectal bleeding | Diagnosis | ICD-10-CM |
| K51.312 | Ulcerative (chronic) rectosigmoiditis with intestinal obstruction | Diagnosis | ICD-10-CM |
| K51.313 | Ulcerative (chronic) rectosigmoiditis with fistula | Diagnosis | ICD-10-CM |
| K51.314 | Ulcerative (chronic) rectosigmoiditis with abscess | Diagnosis | ICD-10-CM |
| K51.318 | Ulcerative (chronic) rectosigmoiditis with other complication | Diagnosis | ICD-10-CM |
| K51.319 | Ulcerative (chronic) rectosigmoiditis with unspecified complications | Diagnosis | ICD-10-CM |
| K51.40 | Inflammatory polyps of colon without complications | Diagnosis | ICD-10-CM |
| K51.411 | Inflammatory polyps of colon with rectal bleeding | Diagnosis | ICD-10-CM |
| K51.412 | Inflammatory polyps of colon with intestinal obstruction | Diagnosis | ICD-10-CM |
| K51.413 | Inflammatory polyps of colon with fistula | Diagnosis | ICD-10-CM |
| K51.414 | Inflammatory polyps of colon with abscess | Diagnosis | ICD-10-CM |
| K51.418 | Inflammatory polyps of colon with other complication | Diagnosis | ICD-10-CM |
| K51.419 | Inflammatory polyps of colon with unspecified complications | Diagnosis | ICD-10-CM |
| K51.50 | Left sided colitis without complications | Diagnosis | ICD-10-CM |
| K51.511 | Left sided colitis with rectal bleeding | Diagnosis | ICD-10-CM |
| K51.512 | Left sided colitis with intestinal obstruction | Diagnosis | ICD-10-CM |
| K51.513 | Left sided colitis with fistula | Diagnosis | ICD-10-CM |
| K51.514 | Left sided colitis with abscess | Diagnosis | ICD-10-CM |
| K51.518 | Left sided colitis with other complication | Diagnosis | ICD-10-CM |
| K51.519 | Left sided colitis with unspecified complications | Diagnosis | ICD-10-CM |
| K51.80 | Other ulcerative colitis without complications | Diagnosis | ICD-10-CM |
| K51.811 | Other ulcerative colitis with rectal bleeding | Diagnosis | ICD-10-CM |
| K51.812 | Other ulcerative colitis with intestinal obstruction | Diagnosis | ICD-10-CM |
| K51.813 | Other ulcerative colitis with fistula | Diagnosis | ICD-10-CM |
| K51.814 | Other ulcerative colitis with abscess | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| K51.818 | Other ulcerative colitis with other complication | Diagnosis | ICD-10-CM |
| K51.819 | Other ulcerative colitis with unspecified complications | Diagnosis | ICD-10-CM |
| K51.90 | Ulcerative colitis, unspecified, without complications | Diagnosis | ICD-10-CM |
| K51.911 | Ulcerative colitis, unspecified with rectal bleeding | Diagnosis | ICD-10-CM |
| K51.912 | Ulcerative colitis, unspecified with intestinal obstruction | Diagnosis | ICD-10-CM |
| K51.913 | Ulcerative colitis, unspecified with fistula | Diagnosis | ICD-10-CM |
| K51.914 | Ulcerative colitis, unspecified with abscess | Diagnosis | ICD-10-CM |
| K51.918 | Ulcerative colitis, unspecified with other complication | Diagnosis | ICD-10-CM |
| K51.919 | Ulcerative colitis, unspecified with unspecified complications | Diagnosis | ICD-10-CM |
| K52.0 | Gastroenteritis and colitis due to radiation | Diagnosis | ICD-10-CM |
| K52.1 | Toxic gastroenteritis and colitis | Diagnosis | ICD-10-CM |
| K52.21 | Food protein-induced enterocolitis syndrome | Diagnosis | ICD-10-CM |
| K52.22 | Food protein-induced enteropathy | Diagnosis | ICD-10-CM |
| K52.29 | Other allergic and dietetic gastroenteritis and colitis | Diagnosis | ICD-10-CM |
| K52.81 | Eosinophilic gastritis or gastroenteritis | Diagnosis | ICD-10-CM |
| K52.82 | Eosinophilic colitis | Diagnosis | ICD-10-CM |
| K52.89 | Other specified noninfective gastroenteritis and colitis | Diagnosis | ICD-10-CM |
| K52.9 | Noninfective gastroenteritis and colitis, unspecified | Diagnosis | ICD-10-CM |
| K55.011 | Focal (segmental) acute (reversible) ischemia of small intestine | Diagnosis | ICD-10-CM |
| K55.012 | Diffuse acute (reversible) ischemia of small intestine | Diagnosis | ICD-10-CM |
| K55.019 | Acute (reversible) ischemia of small intestine, extent unspecified | Diagnosis | ICD-10-CM |
| K55.1 | Chronic vascular disorders of intestine | Diagnosis | ICD-10-CM |
| K55.9 | Vascular disorder of intestine, unspecified | Diagnosis | ICD-10-CM |
| K72.10 | Chronic hepatic failure without coma | Diagnosis | ICD-10-CM |
| K72.11 | Chronic hepatic failure with coma | Diagnosis | ICD-10-CM |
| K72.90 | Hepatic failure, unspecified without coma | Diagnosis | ICD-10-CM |
| K72.91 | Hepatic failure, unspecified with coma | Diagnosis | ICD-10-CM |
| K74.3 | Primary biliary cirrhosis | Diagnosis | ICD-10-CM |
| K76.3 | Infarction of liver | Diagnosis | ICD-10-CM |
| K76.6 | Portal hypertension | Diagnosis | ICD-10-CM |
| K76.81 | Hepatopulmonary syndrome | Diagnosis | ICD-10-CM |
| K91.2 | Postsurgical malabsorption, not elsewhere classified | Diagnosis | ICD-10-CM |
| L10.0 | Pemphigus vulgaris | Diagnosis | ICD-10-CM |
| L10.1 | Pemphigus vegetans | Diagnosis | ICD-10-CM |
| L10.2 | Pemphigus foliaceus | Diagnosis | ICD-10-CM |
| L10.3 | Brazilian pemphigus [fogo selvagem] | Diagnosis | ICD-10-CM |
| L10.4 | Pemphigus erythematosus | Diagnosis | ICD-10-CM |
| L10.81 | Paraneoplastic pemphigus | Diagnosis | ICD-10-CM |
| L10.89 | Other pemphigus | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------------|---|----------------------|------------------|
| L10.9 | Pemphigus, unspecified | Diagnosis | ICD-10-CM |
| L12.0 | Bullous pemphigoid | Diagnosis | ICD-10-CM |
| L12.1 | Cicatricial pemphigoid | Diagnosis | ICD-10-CM |
| L12.2 | Chronic bullous disease of childhood | Diagnosis | ICD-10-CM |
| L12.8 | Other pemphigoid | Diagnosis | ICD-10-CM |
| L12.9 | Pemphigoid, unspecified | Diagnosis | ICD-10-CM |
| L13.0 | Dermatitis herpetiformis | Diagnosis | ICD-10-CM |
| L13.8 | Other specified bullous disorders | Diagnosis | ICD-10-CM |
| L13.9 | Bullous disorder, unspecified | Diagnosis | ICD-10-CM |
| L40.0 | Psoriasis vulgaris | Diagnosis | ICD-10-CM |
| L40.1 | Generalized pustular psoriasis | Diagnosis | ICD-10-CM |
| L40.2 | Acrodermatitis continua | Diagnosis | ICD-10-CM |
| L40.3 | Pustulosis palmaris et plantaris | Diagnosis | ICD-10-CM |
| L40.4 | Guttate psoriasis | Diagnosis | ICD-10-CM |
| L40.50 | Arthropathic psoriasis, unspecified | Diagnosis | ICD-10-CM |
| L40.51 | Distal interphalangeal psoriatic arthropathy | Diagnosis | ICD-10-CM |
| L40.52 | Psoriatic arthritis mutilans | Diagnosis | ICD-10-CM |
| L40.53 | Psoriatic spondylitis | Diagnosis | ICD-10-CM |
| L40.54 | Psoriatic juvenile arthropathy | Diagnosis | ICD-10-CM |
| L40.59 | Other psoriatic arthropathy | Diagnosis | ICD-10-CM |
| L40.8 | Other psoriasis | Diagnosis | ICD-10-CM |
| L40.9 | Psoriasis, unspecified | Diagnosis | ICD-10-CM |
| L93.0 | Discoid lupus erythematosus | Diagnosis | ICD-10-CM |
| L93.1 | Subacute cutaneous lupus erythematosus | Diagnosis | ICD-10-CM |
| L93.2 | Other local lupus erythematosus | Diagnosis | ICD-10-CM |
| M02 | Postinfective and reactive arthropathies | Diagnosis | ICD-10-CM |
| M02.0 | Arthropathy following intestinal bypass | Diagnosis | ICD-10-CM |
| M02.00 | Arthropathy following intestinal bypass, unspecified site | Diagnosis | ICD-10-CM |
| M02.01 | Arthropathy following intestinal bypass, shoulder | Diagnosis | ICD-10-CM |
| M02.011 | Arthropathy following intestinal bypass, right shoulder | Diagnosis | ICD-10-CM |
| M02.012 | Arthropathy following intestinal bypass, left shoulder | Diagnosis | ICD-10-CM |
| M02.019 | Arthropathy following intestinal bypass, unspecified shoulder | Diagnosis | ICD-10-CM |
| M02.02 | Arthropathy following intestinal bypass, elbow | Diagnosis | ICD-10-CM |
| M02.021 | Arthropathy following intestinal bypass, right elbow | Diagnosis | ICD-10-CM |
| M02.022 | Arthropathy following intestinal bypass, left elbow | Diagnosis | ICD-10-CM |
| M02.029 | Arthropathy following intestinal bypass, unspecified elbow | Diagnosis | ICD-10-CM |
| M02.03 | Arthropathy following intestinal bypass, wrist | Diagnosis | ICD-10-CM |
| M02.031 | Arthropathy following intestinal bypass, right wrist | Diagnosis | ICD-10-CM |
| M02.032 | Arthropathy following intestinal bypass, left wrist | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| M02.039 | Arthropathy following intestinal bypass, unspecified wrist | Diagnosis | ICD-10-CM |
| M02.04 | Arthropathy following intestinal bypass, hand | Diagnosis | ICD-10-CM |
| M02.041 | Arthropathy following intestinal bypass, right hand | Diagnosis | ICD-10-CM |
| M02.042 | Arthropathy following intestinal bypass, left hand | Diagnosis | ICD-10-CM |
| M02.049 | Arthropathy following intestinal bypass, unspecified hand | Diagnosis | ICD-10-CM |
| M02.05 | Arthropathy following intestinal bypass, hip | Diagnosis | ICD-10-CM |
| M02.051 | Arthropathy following intestinal bypass, right hip | Diagnosis | ICD-10-CM |
| M02.052 | Arthropathy following intestinal bypass, left hip | Diagnosis | ICD-10-CM |
| M02.059 | Arthropathy following intestinal bypass, unspecified hip | Diagnosis | ICD-10-CM |
| M02.06 | Arthropathy following intestinal bypass, knee | Diagnosis | ICD-10-CM |
| M02.061 | Arthropathy following intestinal bypass, right knee | Diagnosis | ICD-10-CM |
| M02.062 | Arthropathy following intestinal bypass, left knee | Diagnosis | ICD-10-CM |
| M02.069 | Arthropathy following intestinal bypass, unspecified knee | Diagnosis | ICD-10-CM |
| M02.07 | Arthropathy following intestinal bypass, ankle and foot | Diagnosis | ICD-10-CM |
| M02.071 | Arthropathy following intestinal bypass, right ankle and foot | Diagnosis | ICD-10-CM |
| M02.072 | Arthropathy following intestinal bypass, left ankle and foot | Diagnosis | ICD-10-CM |
| M02.079 | Arthropathy following intestinal bypass, unspecified ankle and foot | Diagnosis | ICD-10-CM |
| M02.08 | Arthropathy following intestinal bypass, vertebrae | Diagnosis | ICD-10-CM |
| M02.09 | Arthropathy following intestinal bypass, multiple sites | Diagnosis | ICD-10-CM |
| M02.1 | Postdysenteric arthropathy | Diagnosis | ICD-10-CM |
| M02.10 | Postdysenteric arthropathy, unspecified site | Diagnosis | ICD-10-CM |
| M02.11 | Postdysenteric arthropathy, shoulder | Diagnosis | ICD-10-CM |
| M02.111 | Postdysenteric arthropathy, right shoulder | Diagnosis | ICD-10-CM |
| M02.112 | Postdysenteric arthropathy, left shoulder | Diagnosis | ICD-10-CM |
| M02.119 | Postdysenteric arthropathy, unspecified shoulder | Diagnosis | ICD-10-CM |
| M02.12 | Postdysenteric arthropathy, elbow | Diagnosis | ICD-10-CM |
| M02.121 | Postdysenteric arthropathy, right elbow | Diagnosis | ICD-10-CM |
| M02.122 | Postdysenteric arthropathy, left elbow | Diagnosis | ICD-10-CM |
| M02.129 | Postdysenteric arthropathy, unspecified elbow | Diagnosis | ICD-10-CM |
| M02.13 | Postdysenteric arthropathy, wrist | Diagnosis | ICD-10-CM |
| M02.131 | Postdysenteric arthropathy, right wrist | Diagnosis | ICD-10-CM |
| M02.132 | Postdysenteric arthropathy, left wrist | Diagnosis | ICD-10-CM |
| M02.139 | Postdysenteric arthropathy, unspecified wrist | Diagnosis | ICD-10-CM |
| M02.14 | Postdysenteric arthropathy, hand | Diagnosis | ICD-10-CM |
| M02.141 | Postdysenteric arthropathy, right hand | Diagnosis | ICD-10-CM |
| M02.142 | Postdysenteric arthropathy, left hand | Diagnosis | ICD-10-CM |
| M02.149 | Postdysenteric arthropathy, unspecified hand | Diagnosis | ICD-10-CM |
| M02.15 | Postdysenteric arthropathy, hip | Diagnosis | ICD-10-CM |
| M02.151 | Postdysenteric arthropathy, right hip | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| M02.152 | Postdysenteric arthropathy, left hip | Diagnosis | ICD-10-CM |
| M02.159 | Postdysenteric arthropathy, unspecified hip | Diagnosis | ICD-10-CM |
| M02.16 | Postdysenteric arthropathy, knee | Diagnosis | ICD-10-CM |
| M02.161 | Postdysenteric arthropathy, right knee | Diagnosis | ICD-10-CM |
| M02.162 | Postdysenteric arthropathy, left knee | Diagnosis | ICD-10-CM |
| M02.169 | Postdysenteric arthropathy, unspecified knee | Diagnosis | ICD-10-CM |
| M02.17 | Postdysenteric arthropathy, ankle and foot | Diagnosis | ICD-10-CM |
| M02.171 | Postdysenteric arthropathy, right ankle and foot | Diagnosis | ICD-10-CM |
| M02.172 | Postdysenteric arthropathy, left ankle and foot | Diagnosis | ICD-10-CM |
| M02.179 | Postdysenteric arthropathy, unspecified ankle and foot | Diagnosis | ICD-10-CM |
| M02.18 | Postdysenteric arthropathy, vertebrae | Diagnosis | ICD-10-CM |
| M02.19 | Postdysenteric arthropathy, multiple sites | Diagnosis | ICD-10-CM |
| M02.2 | Postimmunization arthropathy | Diagnosis | ICD-10-CM |
| M02.20 | Postimmunization arthropathy, unspecified site | Diagnosis | ICD-10-CM |
| M02.21 | Postimmunization arthropathy, shoulder | Diagnosis | ICD-10-CM |
| M02.211 | Postimmunization arthropathy, right shoulder | Diagnosis | ICD-10-CM |
| M02.212 | Postimmunization arthropathy, left shoulder | Diagnosis | ICD-10-CM |
| M02.219 | Postimmunization arthropathy, unspecified shoulder | Diagnosis | ICD-10-CM |
| M02.22 | Postimmunization arthropathy, elbow | Diagnosis | ICD-10-CM |
| M02.221 | Postimmunization arthropathy, right elbow | Diagnosis | ICD-10-CM |
| M02.222 | Postimmunization arthropathy, left elbow | Diagnosis | ICD-10-CM |
| M02.229 | Postimmunization arthropathy, unspecified elbow | Diagnosis | ICD-10-CM |
| M02.23 | Postimmunization arthropathy, wrist | Diagnosis | ICD-10-CM |
| M02.231 | Postimmunization arthropathy, right wrist | Diagnosis | ICD-10-CM |
| M02.232 | Postimmunization arthropathy, left wrist | Diagnosis | ICD-10-CM |
| M02.239 | Postimmunization arthropathy, unspecified wrist | Diagnosis | ICD-10-CM |
| M02.24 | Postimmunization arthropathy, hand | Diagnosis | ICD-10-CM |
| M02.241 | Postimmunization arthropathy, right hand | Diagnosis | ICD-10-CM |
| M02.242 | Postimmunization arthropathy, left hand | Diagnosis | ICD-10-CM |
| M02.249 | Postimmunization arthropathy, unspecified hand | Diagnosis | ICD-10-CM |
| M02.25 | Postimmunization arthropathy, hip | Diagnosis | ICD-10-CM |
| M02.251 | Postimmunization arthropathy, right hip | Diagnosis | ICD-10-CM |
| M02.252 | Postimmunization arthropathy, left hip | Diagnosis | ICD-10-CM |
| M02.259 | Postimmunization arthropathy, unspecified hip | Diagnosis | ICD-10-CM |
| M02.26 | Postimmunization arthropathy, knee | Diagnosis | ICD-10-CM |
| M02.261 | Postimmunization arthropathy, right knee | Diagnosis | ICD-10-CM |
| M02.262 | Postimmunization arthropathy, left knee | Diagnosis | ICD-10-CM |
| M02.269 | Postimmunization arthropathy, unspecified knee | Diagnosis | ICD-10-CM |
| M02.27 | Postimmunization arthropathy, ankle and foot | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| M02.271 | Postimmunization arthropathy, right ankle and foot | Diagnosis | ICD-10-CM |
| M02.272 | Postimmunization arthropathy, left ankle and foot | Diagnosis | ICD-10-CM |
| M02.279 | Postimmunization arthropathy, unspecified ankle and foot | Diagnosis | ICD-10-CM |
| M02.28 | Postimmunization arthropathy, vertebrae | Diagnosis | ICD-10-CM |
| M02.29 | Postimmunization arthropathy, multiple sites | Diagnosis | ICD-10-CM |
| M02.3 | Reiter's disease | Diagnosis | ICD-10-CM |
| M02.30 | Reiter's disease, unspecified site | Diagnosis | ICD-10-CM |
| M02.31 | Reiter's disease, shoulder | Diagnosis | ICD-10-CM |
| M02.311 | Reiter's disease, right shoulder | Diagnosis | ICD-10-CM |
| M02.312 | Reiter's disease, left shoulder | Diagnosis | ICD-10-CM |
| M02.319 | Reiter's disease, unspecified shoulder | Diagnosis | ICD-10-CM |
| M02.32 | Reiter's disease, elbow | Diagnosis | ICD-10-CM |
| M02.321 | Reiter's disease, right elbow | Diagnosis | ICD-10-CM |
| M02.322 | Reiter's disease, left elbow | Diagnosis | ICD-10-CM |
| M02.329 | Reiter's disease, unspecified elbow | Diagnosis | ICD-10-CM |
| M02.33 | Reiter's disease, wrist | Diagnosis | ICD-10-CM |
| M02.331 | Reiter's disease, right wrist | Diagnosis | ICD-10-CM |
| M02.332 | Reiter's disease, left wrist | Diagnosis | ICD-10-CM |
| M02.339 | Reiter's disease, unspecified wrist | Diagnosis | ICD-10-CM |
| M02.34 | Reiter's disease, hand | Diagnosis | ICD-10-CM |
| M02.341 | Reiter's disease, right hand | Diagnosis | ICD-10-CM |
| M02.342 | Reiter's disease, left hand | Diagnosis | ICD-10-CM |
| M02.349 | Reiter's disease, unspecified hand | Diagnosis | ICD-10-CM |
| M02.35 | Reiter's disease, hip | Diagnosis | ICD-10-CM |
| M02.351 | Reiter's disease, right hip | Diagnosis | ICD-10-CM |
| M02.352 | Reiter's disease, left hip | Diagnosis | ICD-10-CM |
| M02.359 | Reiter's disease, unspecified hip | Diagnosis | ICD-10-CM |
| M02.36 | Reiter's disease, knee | Diagnosis | ICD-10-CM |
| M02.361 | Reiter's disease, right knee | Diagnosis | ICD-10-CM |
| M02.362 | Reiter's disease, left knee | Diagnosis | ICD-10-CM |
| M02.369 | Reiter's disease, unspecified knee | Diagnosis | ICD-10-CM |
| M02.37 | Reiter's disease, ankle and foot | Diagnosis | ICD-10-CM |
| M02.371 | Reiter's disease, right ankle and foot | Diagnosis | ICD-10-CM |
| M02.372 | Reiter's disease, left ankle and foot | Diagnosis | ICD-10-CM |
| M02.379 | Reiter's disease, unspecified ankle and foot | Diagnosis | ICD-10-CM |
| M02.38 | Reiter's disease, vertebrae | Diagnosis | ICD-10-CM |
| M02.39 | Reiter's disease, multiple sites | Diagnosis | ICD-10-CM |
| M02.8 | Other reactive arthropathies | Diagnosis | ICD-10-CM |
| M02.80 | Other reactive arthropathies, unspecified site | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| M02.81 | Other reactive arthropathies, shoulder | Diagnosis | ICD-10-CM |
| M02.811 | Other reactive arthropathies, right shoulder | Diagnosis | ICD-10-CM |
| M02.812 | Other reactive arthropathies, left shoulder | Diagnosis | ICD-10-CM |
| M02.819 | Other reactive arthropathies, unspecified shoulder | Diagnosis | ICD-10-CM |
| M02.82 | Other reactive arthropathies, elbow | Diagnosis | ICD-10-CM |
| M02.821 | Other reactive arthropathies, right elbow | Diagnosis | ICD-10-CM |
| M02.822 | Other reactive arthropathies, left elbow | Diagnosis | ICD-10-CM |
| M02.829 | Other reactive arthropathies, unspecified elbow | Diagnosis | ICD-10-CM |
| M02.83 | Other reactive arthropathies, wrist | Diagnosis | ICD-10-CM |
| M02.831 | Other reactive arthropathies, right wrist | Diagnosis | ICD-10-CM |
| M02.832 | Other reactive arthropathies, left wrist | Diagnosis | ICD-10-CM |
| M02.839 | Other reactive arthropathies, unspecified wrist | Diagnosis | ICD-10-CM |
| M02.84 | Other reactive arthropathies, hand | Diagnosis | ICD-10-CM |
| M02.841 | Other reactive arthropathies, right hand | Diagnosis | ICD-10-CM |
| M02.842 | Other reactive arthropathies, left hand | Diagnosis | ICD-10-CM |
| M02.849 | Other reactive arthropathies, unspecified hand | Diagnosis | ICD-10-CM |
| M02.85 | Other reactive arthropathies, hip | Diagnosis | ICD-10-CM |
| M02.851 | Other reactive arthropathies, right hip | Diagnosis | ICD-10-CM |
| M02.852 | Other reactive arthropathies, left hip | Diagnosis | ICD-10-CM |
| M02.859 | Other reactive arthropathies, unspecified hip | Diagnosis | ICD-10-CM |
| M02.86 | Other reactive arthropathies, knee | Diagnosis | ICD-10-CM |
| M02.861 | Other reactive arthropathies, right knee | Diagnosis | ICD-10-CM |
| M02.862 | Other reactive arthropathies, left knee | Diagnosis | ICD-10-CM |
| M02.869 | Other reactive arthropathies, unspecified knee | Diagnosis | ICD-10-CM |
| M02.87 | Other reactive arthropathies, ankle and foot | Diagnosis | ICD-10-CM |
| M02.871 | Other reactive arthropathies, right ankle and foot | Diagnosis | ICD-10-CM |
| M02.872 | Other reactive arthropathies, left ankle and foot | Diagnosis | ICD-10-CM |
| M02.879 | Other reactive arthropathies, unspecified ankle and foot | Diagnosis | ICD-10-CM |
| M02.88 | Other reactive arthropathies, vertebrae | Diagnosis | ICD-10-CM |
| M02.89 | Other reactive arthropathies, multiple sites | Diagnosis | ICD-10-CM |
| M02.9 | Reactive arthropathy, unspecified | Diagnosis | ICD-10-CM |
| M04 | Autoinflammatory syndromes | Diagnosis | ICD-10-CM |
| M04.1 | Periodic fever syndromes | Diagnosis | ICD-10-CM |
| M04.2 | Cryopyrin-associated periodic syndromes | Diagnosis | ICD-10-CM |
| M04.8 | Other autoinflammatory syndromes | Diagnosis | ICD-10-CM |
| M04.9 | Autoinflammatory syndrome, unspecified | Diagnosis | ICD-10-CM |
| M05 | Rheumatoid arthritis with rheumatoid factor | Diagnosis | ICD-10-CM |
| M05.0 | Felty's syndrome | Diagnosis | ICD-10-CM |
| M05.00 | Felty's syndrome, unspecified site | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| M05.01 | Felty's syndrome, shoulder | Diagnosis | ICD-10-CM |
| M05.011 | Felty's syndrome, right shoulder | Diagnosis | ICD-10-CM |
| M05.012 | Felty's syndrome, left shoulder | Diagnosis | ICD-10-CM |
| M05.019 | Felty's syndrome, unspecified shoulder | Diagnosis | ICD-10-CM |
| M05.02 | Felty's syndrome, elbow | Diagnosis | ICD-10-CM |
| M05.021 | Felty's syndrome, right elbow | Diagnosis | ICD-10-CM |
| M05.022 | Felty's syndrome, left elbow | Diagnosis | ICD-10-CM |
| M05.029 | Felty's syndrome, unspecified elbow | Diagnosis | ICD-10-CM |
| M05.03 | Felty's syndrome, wrist | Diagnosis | ICD-10-CM |
| M05.031 | Felty's syndrome, right wrist | Diagnosis | ICD-10-CM |
| M05.032 | Felty's syndrome, left wrist | Diagnosis | ICD-10-CM |
| M05.039 | Felty's syndrome, unspecified wrist | Diagnosis | ICD-10-CM |
| M05.04 | Felty's syndrome, hand | Diagnosis | ICD-10-CM |
| M05.041 | Felty's syndrome, right hand | Diagnosis | ICD-10-CM |
| M05.042 | Felty's syndrome, left hand | Diagnosis | ICD-10-CM |
| M05.049 | Felty's syndrome, unspecified hand | Diagnosis | ICD-10-CM |
| M05.05 | Felty's syndrome, hip | Diagnosis | ICD-10-CM |
| M05.051 | Felty's syndrome, right hip | Diagnosis | ICD-10-CM |
| M05.052 | Felty's syndrome, left hip | Diagnosis | ICD-10-CM |
| M05.059 | Felty's syndrome, unspecified hip | Diagnosis | ICD-10-CM |
| M05.06 | Felty's syndrome, knee | Diagnosis | ICD-10-CM |
| M05.061 | Felty's syndrome, right knee | Diagnosis | ICD-10-CM |
| M05.062 | Felty's syndrome, left knee | Diagnosis | ICD-10-CM |
| M05.069 | Felty's syndrome, unspecified knee | Diagnosis | ICD-10-CM |
| M05.07 | Felty's syndrome, ankle and foot | Diagnosis | ICD-10-CM |
| M05.071 | Felty's syndrome, right ankle and foot | Diagnosis | ICD-10-CM |
| M05.072 | Felty's syndrome, left ankle and foot | Diagnosis | ICD-10-CM |
| M05.079 | Felty's syndrome, unspecified ankle and foot | Diagnosis | ICD-10-CM |
| M05.09 | Felty's syndrome, multiple sites | Diagnosis | ICD-10-CM |
| M05.1 | Rheumatoid lung disease with rheumatoid arthritis | Diagnosis | ICD-10-CM |
| M05.10 | Rheumatoid lung disease with rheumatoid arthritis of unspecified site | Diagnosis | ICD-10-CM |
| M05.11 | Rheumatoid lung disease with rheumatoid arthritis of shoulder | Diagnosis | ICD-10-CM |
| M05.111 | Rheumatoid lung disease with rheumatoid arthritis of right shoulder | Diagnosis | ICD-10-CM |
| M05.112 | Rheumatoid lung disease with rheumatoid arthritis of left shoulder | Diagnosis | ICD-10-CM |
| M05.119 | Rheumatoid lung disease with rheumatoid arthritis of unspecified shoulder | Diagnosis | ICD-10-CM |
| M05.12 | Rheumatoid lung disease with rheumatoid arthritis of elbow | Diagnosis | ICD-10-CM |
| M05.121 | Rheumatoid lung disease with rheumatoid arthritis of right elbow | Diagnosis | ICD-10-CM |
| M05.122 | Rheumatoid lung disease with rheumatoid arthritis of left elbow | Diagnosis | ICD-10-CM |
| M05.129 | Rheumatoid lung disease with rheumatoid arthritis of unspecified elbow | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| M05.13 | Rheumatoid lung disease with rheumatoid arthritis of wrist | Diagnosis | ICD-10-CM |
| M05.131 | Rheumatoid lung disease with rheumatoid arthritis of right wrist | Diagnosis | ICD-10-CM |
| M05.132 | Rheumatoid lung disease with rheumatoid arthritis of left wrist | Diagnosis | ICD-10-CM |
| M05.139 | Rheumatoid lung disease with rheumatoid arthritis of unspecified wrist | Diagnosis | ICD-10-CM |
| M05.14 | Rheumatoid lung disease with rheumatoid arthritis of hand | Diagnosis | ICD-10-CM |
| M05.141 | Rheumatoid lung disease with rheumatoid arthritis of right hand | Diagnosis | ICD-10-CM |
| M05.142 | Rheumatoid lung disease with rheumatoid arthritis of left hand | Diagnosis | ICD-10-CM |
| M05.149 | Rheumatoid lung disease with rheumatoid arthritis of unspecified hand | Diagnosis | ICD-10-CM |
| M05.15 | Rheumatoid lung disease with rheumatoid arthritis of hip | Diagnosis | ICD-10-CM |
| M05.151 | Rheumatoid lung disease with rheumatoid arthritis of right hip | Diagnosis | ICD-10-CM |
| M05.152 | Rheumatoid lung disease with rheumatoid arthritis of left hip | Diagnosis | ICD-10-CM |
| M05.159 | Rheumatoid lung disease with rheumatoid arthritis of unspecified hip | Diagnosis | ICD-10-CM |
| M05.16 | Rheumatoid lung disease with rheumatoid arthritis of knee | Diagnosis | ICD-10-CM |
| M05.161 | Rheumatoid lung disease with rheumatoid arthritis of right knee | Diagnosis | ICD-10-CM |
| M05.162 | Rheumatoid lung disease with rheumatoid arthritis of left knee | Diagnosis | ICD-10-CM |
| M05.169 | Rheumatoid lung disease with rheumatoid arthritis of unspecified knee | Diagnosis | ICD-10-CM |
| M05.17 | Rheumatoid lung disease with rheumatoid arthritis of ankle and foot | Diagnosis | ICD-10-CM |
| M05.171 | Rheumatoid lung disease with rheumatoid arthritis of right ankle and foot | Diagnosis | ICD-10-CM |
| M05.172 | Rheumatoid lung disease with rheumatoid arthritis of left ankle and foot | Diagnosis | ICD-10-CM |
| M05.179 | Rheumatoid lung disease with rheumatoid arthritis of unspecified ankle and foot | Diagnosis | ICD-10-CM |
| M05.19 | Rheumatoid lung disease with rheumatoid arthritis of multiple sites | Diagnosis | ICD-10-CM |
| M05.2 | Rheumatoid vasculitis with rheumatoid arthritis | Diagnosis | ICD-10-CM |
| M05.20 | Rheumatoid vasculitis with rheumatoid arthritis of unspecified site | Diagnosis | ICD-10-CM |
| M05.21 | Rheumatoid vasculitis with rheumatoid arthritis of shoulder | Diagnosis | ICD-10-CM |
| M05.211 | Rheumatoid vasculitis with rheumatoid arthritis of right shoulder | Diagnosis | ICD-10-CM |
| M05.212 | Rheumatoid vasculitis with rheumatoid arthritis of left shoulder | Diagnosis | ICD-10-CM |
| M05.219 | Rheumatoid vasculitis with rheumatoid arthritis of unspecified shoulder | Diagnosis | ICD-10-CM |
| M05.22 | Rheumatoid vasculitis with rheumatoid arthritis of elbow | Diagnosis | ICD-10-CM |
| M05.221 | Rheumatoid vasculitis with rheumatoid arthritis of right elbow | Diagnosis | ICD-10-CM |
| M05.222 | Rheumatoid vasculitis with rheumatoid arthritis of left elbow | Diagnosis | ICD-10-CM |
| M05.229 | Rheumatoid vasculitis with rheumatoid arthritis of unspecified elbow | Diagnosis | ICD-10-CM |
| M05.23 | Rheumatoid vasculitis with rheumatoid arthritis of wrist | Diagnosis | ICD-10-CM |
| M05.231 | Rheumatoid vasculitis with rheumatoid arthritis of right wrist | Diagnosis | ICD-10-CM |
| M05.232 | Rheumatoid vasculitis with rheumatoid arthritis of left wrist | Diagnosis | ICD-10-CM |
| M05.239 | Rheumatoid vasculitis with rheumatoid arthritis of unspecified wrist | Diagnosis | ICD-10-CM |
| M05.24 | Rheumatoid vasculitis with rheumatoid arthritis of hand | Diagnosis | ICD-10-CM |
| M05.241 | Rheumatoid vasculitis with rheumatoid arthritis of right hand | Diagnosis | ICD-10-CM |
| M05.242 | Rheumatoid vasculitis with rheumatoid arthritis of left hand | Diagnosis | ICD-10-CM |
| M05.249 | Rheumatoid vasculitis with rheumatoid arthritis of unspecified hand | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| M05.25 | Rheumatoid vasculitis with rheumatoid arthritis of hip | Diagnosis | ICD-10-CM |
| M05.251 | Rheumatoid vasculitis with rheumatoid arthritis of right hip | Diagnosis | ICD-10-CM |
| M05.252 | Rheumatoid vasculitis with rheumatoid arthritis of left hip | Diagnosis | ICD-10-CM |
| M05.259 | Rheumatoid vasculitis with rheumatoid arthritis of unspecified hip | Diagnosis | ICD-10-CM |
| M05.26 | Rheumatoid vasculitis with rheumatoid arthritis of knee | Diagnosis | ICD-10-CM |
| M05.261 | Rheumatoid vasculitis with rheumatoid arthritis of right knee | Diagnosis | ICD-10-CM |
| M05.262 | Rheumatoid vasculitis with rheumatoid arthritis of left knee | Diagnosis | ICD-10-CM |
| M05.269 | Rheumatoid vasculitis with rheumatoid arthritis of unspecified knee | Diagnosis | ICD-10-CM |
| M05.27 | Rheumatoid vasculitis with rheumatoid arthritis of ankle and foot | Diagnosis | ICD-10-CM |
| M05.271 | Rheumatoid vasculitis with rheumatoid arthritis of right ankle and foot | Diagnosis | ICD-10-CM |
| M05.272 | Rheumatoid vasculitis with rheumatoid arthritis of left ankle and foot | Diagnosis | ICD-10-CM |
| M05.279 | Rheumatoid vasculitis with rheumatoid arthritis of unspecified ankle and foot | Diagnosis | ICD-10-CM |
| M05.29 | Rheumatoid vasculitis with rheumatoid arthritis of multiple sites | Diagnosis | ICD-10-CM |
| M05.3 | Rheumatoid heart disease with rheumatoid arthritis | Diagnosis | ICD-10-CM |
| M05.30 | Rheumatoid heart disease with rheumatoid arthritis of unspecified site | Diagnosis | ICD-10-CM |
| M05.31 | Rheumatoid heart disease with rheumatoid arthritis of shoulder | Diagnosis | ICD-10-CM |
| M05.311 | Rheumatoid heart disease with rheumatoid arthritis of right shoulder | Diagnosis | ICD-10-CM |
| M05.312 | Rheumatoid heart disease with rheumatoid arthritis of left shoulder | Diagnosis | ICD-10-CM |
| M05.319 | Rheumatoid heart disease with rheumatoid arthritis of unspecified shoulder | Diagnosis | ICD-10-CM |
| M05.32 | Rheumatoid heart disease with rheumatoid arthritis of elbow | Diagnosis | ICD-10-CM |
| M05.321 | Rheumatoid heart disease with rheumatoid arthritis of right elbow | Diagnosis | ICD-10-CM |
| M05.322 | Rheumatoid heart disease with rheumatoid arthritis of left elbow | Diagnosis | ICD-10-CM |
| M05.329 | Rheumatoid heart disease with rheumatoid arthritis of unspecified elbow | Diagnosis | ICD-10-CM |
| M05.33 | Rheumatoid heart disease with rheumatoid arthritis of wrist | Diagnosis | ICD-10-CM |
| M05.331 | Rheumatoid heart disease with rheumatoid arthritis of right wrist | Diagnosis | ICD-10-CM |
| M05.332 | Rheumatoid heart disease with rheumatoid arthritis of left wrist | Diagnosis | ICD-10-CM |
| M05.339 | Rheumatoid heart disease with rheumatoid arthritis of unspecified wrist | Diagnosis | ICD-10-CM |
| M05.34 | Rheumatoid heart disease with rheumatoid arthritis of hand | Diagnosis | ICD-10-CM |
| M05.341 | Rheumatoid heart disease with rheumatoid arthritis of right hand | Diagnosis | ICD-10-CM |
| M05.342 | Rheumatoid heart disease with rheumatoid arthritis of left hand | Diagnosis | ICD-10-CM |
| M05.349 | Rheumatoid heart disease with rheumatoid arthritis of unspecified hand | Diagnosis | ICD-10-CM |
| M05.35 | Rheumatoid heart disease with rheumatoid arthritis of hip | Diagnosis | ICD-10-CM |
| M05.351 | Rheumatoid heart disease with rheumatoid arthritis of right hip | Diagnosis | ICD-10-CM |
| M05.352 | Rheumatoid heart disease with rheumatoid arthritis of left hip | Diagnosis | ICD-10-CM |
| M05.359 | Rheumatoid heart disease with rheumatoid arthritis of unspecified hip | Diagnosis | ICD-10-CM |
| M05.36 | Rheumatoid heart disease with rheumatoid arthritis of knee | Diagnosis | ICD-10-CM |
| M05.361 | Rheumatoid heart disease with rheumatoid arthritis of right knee | Diagnosis | ICD-10-CM |
| M05.362 | Rheumatoid heart disease with rheumatoid arthritis of left knee | Diagnosis | ICD-10-CM |
| M05.369 | Rheumatoid heart disease with rheumatoid arthritis of unspecified knee | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| M05.37 | Rheumatoid heart disease with rheumatoid arthritis of ankle and foot | Diagnosis | ICD-10-CM |
| M05.371 | Rheumatoid heart disease with rheumatoid arthritis of right ankle and foot | Diagnosis | ICD-10-CM |
| M05.372 | Rheumatoid heart disease with rheumatoid arthritis of left ankle and foot | Diagnosis | ICD-10-CM |
| M05.379 | Rheumatoid heart disease with rheumatoid arthritis of unspecified ankle and foot | Diagnosis | ICD-10-CM |
| M05.39 | Rheumatoid heart disease with rheumatoid arthritis of multiple sites | Diagnosis | ICD-10-CM |
| M05.4 | Rheumatoid myopathy with rheumatoid arthritis | Diagnosis | ICD-10-CM |
| M05.40 | Rheumatoid myopathy with rheumatoid arthritis of unspecified site | Diagnosis | ICD-10-CM |
| M05.41 | Rheumatoid myopathy with rheumatoid arthritis of shoulder | Diagnosis | ICD-10-CM |
| M05.411 | Rheumatoid myopathy with rheumatoid arthritis of right shoulder | Diagnosis | ICD-10-CM |
| M05.412 | Rheumatoid myopathy with rheumatoid arthritis of left shoulder | Diagnosis | ICD-10-CM |
| M05.419 | Rheumatoid myopathy with rheumatoid arthritis of unspecified shoulder | Diagnosis | ICD-10-CM |
| M05.42 | Rheumatoid myopathy with rheumatoid arthritis of elbow | Diagnosis | ICD-10-CM |
| M05.421 | Rheumatoid myopathy with rheumatoid arthritis of right elbow | Diagnosis | ICD-10-CM |
| M05.422 | Rheumatoid myopathy with rheumatoid arthritis of left elbow | Diagnosis | ICD-10-CM |
| M05.429 | Rheumatoid myopathy with rheumatoid arthritis of unspecified elbow | Diagnosis | ICD-10-CM |
| M05.43 | Rheumatoid myopathy with rheumatoid arthritis of wrist | Diagnosis | ICD-10-CM |
| M05.431 | Rheumatoid myopathy with rheumatoid arthritis of right wrist | Diagnosis | ICD-10-CM |
| M05.432 | Rheumatoid myopathy with rheumatoid arthritis of left wrist | Diagnosis | ICD-10-CM |
| M05.439 | Rheumatoid myopathy with rheumatoid arthritis of unspecified wrist | Diagnosis | ICD-10-CM |
| M05.44 | Rheumatoid myopathy with rheumatoid arthritis of hand | Diagnosis | ICD-10-CM |
| M05.441 | Rheumatoid myopathy with rheumatoid arthritis of right hand | Diagnosis | ICD-10-CM |
| M05.442 | Rheumatoid myopathy with rheumatoid arthritis of left hand | Diagnosis | ICD-10-CM |
| M05.449 | Rheumatoid myopathy with rheumatoid arthritis of unspecified hand | Diagnosis | ICD-10-CM |
| M05.45 | Rheumatoid myopathy with rheumatoid arthritis of hip | Diagnosis | ICD-10-CM |
| M05.451 | Rheumatoid myopathy with rheumatoid arthritis of right hip | Diagnosis | ICD-10-CM |
| M05.452 | Rheumatoid myopathy with rheumatoid arthritis of left hip | Diagnosis | ICD-10-CM |
| M05.459 | Rheumatoid myopathy with rheumatoid arthritis of unspecified hip | Diagnosis | ICD-10-CM |
| M05.46 | Rheumatoid myopathy with rheumatoid arthritis of knee | Diagnosis | ICD-10-CM |
| M05.461 | Rheumatoid myopathy with rheumatoid arthritis of right knee | Diagnosis | ICD-10-CM |
| M05.462 | Rheumatoid myopathy with rheumatoid arthritis of left knee | Diagnosis | ICD-10-CM |
| M05.469 | Rheumatoid myopathy with rheumatoid arthritis of unspecified knee | Diagnosis | ICD-10-CM |
| M05.47 | Rheumatoid myopathy with rheumatoid arthritis of ankle and foot | Diagnosis | ICD-10-CM |
| M05.471 | Rheumatoid myopathy with rheumatoid arthritis of right ankle and foot | Diagnosis | ICD-10-CM |
| M05.472 | Rheumatoid myopathy with rheumatoid arthritis of left ankle and foot | Diagnosis | ICD-10-CM |
| M05.479 | Rheumatoid myopathy with rheumatoid arthritis of unspecified ankle and foot | Diagnosis | ICD-10-CM |
| M05.49 | Rheumatoid myopathy with rheumatoid arthritis of multiple sites | Diagnosis | ICD-10-CM |
| M05.5 | Rheumatoid polyneuropathy with rheumatoid arthritis | Diagnosis | ICD-10-CM |
| M05.50 | Rheumatoid polyneuropathy with rheumatoid arthritis of unspecified site | Diagnosis | ICD-10-CM |
| M05.51 | Rheumatoid polyneuropathy with rheumatoid arthritis of shoulder | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| M05.511 | Rheumatoid polyneuropathy with rheumatoid arthritis of right shoulder | Diagnosis | ICD-10-CM |
| M05.512 | Rheumatoid polyneuropathy with rheumatoid arthritis of left shoulder | Diagnosis | ICD-10-CM |
| M05.519 | Rheumatoid polyneuropathy with rheumatoid arthritis of unspecified shoulder | Diagnosis | ICD-10-CM |
| M05.52 | Rheumatoid polyneuropathy with rheumatoid arthritis of elbow | Diagnosis | ICD-10-CM |
| M05.521 | Rheumatoid polyneuropathy with rheumatoid arthritis of right elbow | Diagnosis | ICD-10-CM |
| M05.522 | Rheumatoid polyneuropathy with rheumatoid arthritis of left elbow | Diagnosis | ICD-10-CM |
| M05.529 | Rheumatoid polyneuropathy with rheumatoid arthritis of unspecified elbow | Diagnosis | ICD-10-CM |
| M05.53 | Rheumatoid polyneuropathy with rheumatoid arthritis of wrist | Diagnosis | ICD-10-CM |
| M05.531 | Rheumatoid polyneuropathy with rheumatoid arthritis of right wrist | Diagnosis | ICD-10-CM |
| M05.532 | Rheumatoid polyneuropathy with rheumatoid arthritis of left wrist | Diagnosis | ICD-10-CM |
| M05.539 | Rheumatoid polyneuropathy with rheumatoid arthritis of unspecified wrist | Diagnosis | ICD-10-CM |
| M05.54 | Rheumatoid polyneuropathy with rheumatoid arthritis of hand | Diagnosis | ICD-10-CM |
| M05.541 | Rheumatoid polyneuropathy with rheumatoid arthritis of right hand | Diagnosis | ICD-10-CM |
| M05.542 | Rheumatoid polyneuropathy with rheumatoid arthritis of left hand | Diagnosis | ICD-10-CM |
| M05.549 | Rheumatoid polyneuropathy with rheumatoid arthritis of unspecified hand | Diagnosis | ICD-10-CM |
| M05.55 | Rheumatoid polyneuropathy with rheumatoid arthritis of hip | Diagnosis | ICD-10-CM |
| M05.551 | Rheumatoid polyneuropathy with rheumatoid arthritis of right hip | Diagnosis | ICD-10-CM |
| M05.552 | Rheumatoid polyneuropathy with rheumatoid arthritis of left hip | Diagnosis | ICD-10-CM |
| M05.559 | Rheumatoid polyneuropathy with rheumatoid arthritis of unspecified hip | Diagnosis | ICD-10-CM |
| M05.56 | Rheumatoid polyneuropathy with rheumatoid arthritis of knee | Diagnosis | ICD-10-CM |
| M05.561 | Rheumatoid polyneuropathy with rheumatoid arthritis of right knee | Diagnosis | ICD-10-CM |
| M05.562 | Rheumatoid polyneuropathy with rheumatoid arthritis of left knee | Diagnosis | ICD-10-CM |
| M05.569 | Rheumatoid polyneuropathy with rheumatoid arthritis of unspecified knee | Diagnosis | ICD-10-CM |
| M05.57 | Rheumatoid polyneuropathy with rheumatoid arthritis of ankle and foot | Diagnosis | ICD-10-CM |
| M05.571 | Rheumatoid polyneuropathy with rheumatoid arthritis of right ankle and foot | Diagnosis | ICD-10-CM |
| M05.572 | Rheumatoid polyneuropathy with rheumatoid arthritis of left ankle and foot | Diagnosis | ICD-10-CM |
| M05.579 | Rheumatoid polyneuropathy with rheumatoid arthritis of unspecified ankle and foot | Diagnosis | ICD-10-CM |
| M05.59 | Rheumatoid polyneuropathy with rheumatoid arthritis of multiple sites | Diagnosis | ICD-10-CM |
| M05.6 | Rheumatoid arthritis with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.60 | Rheumatoid arthritis of unspecified site with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.61 | Rheumatoid arthritis of shoulder with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.611 | Rheumatoid arthritis of right shoulder with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.612 | Rheumatoid arthritis of left shoulder with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.619 | Rheumatoid arthritis of unspecified shoulder with involvement of other organs and | Diagnosis | ICD-10-CM |
| M05.62 | Rheumatoid arthritis of elbow with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.621 | Rheumatoid arthritis of right elbow with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.622 | Rheumatoid arthritis of left elbow with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.629 | Rheumatoid arthritis of unspecified elbow with involvement of other organs and | Diagnosis | ICD-10-CM |
| M05.63 | Rheumatoid arthritis of wrist with involvement of other organs and systems | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| M05.631 | Rheumatoid arthritis of right wrist with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.632 | Rheumatoid arthritis of left wrist with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.639 | Rheumatoid arthritis of unspecified wrist with involvement of other organs and | Diagnosis | ICD-10-CM |
| M05.64 | Rheumatoid arthritis of hand with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.641 | Rheumatoid arthritis of right hand with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.642 | Rheumatoid arthritis of left hand with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.649 | Rheumatoid arthritis of unspecified hand with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.65 | Rheumatoid arthritis of hip with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.651 | Rheumatoid arthritis of right hip with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.652 | Rheumatoid arthritis of left hip with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.659 | Rheumatoid arthritis of unspecified hip with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.66 | Rheumatoid arthritis of knee with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.661 | Rheumatoid arthritis of right knee with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.662 | Rheumatoid arthritis of left knee with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.669 | Rheumatoid arthritis of unspecified knee with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.67 | Rheumatoid arthritis of ankle and foot with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.671 | Rheumatoid arthritis of right ankle and foot with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.672 | Rheumatoid arthritis of left ankle and foot with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.679 | Rheumatoid arthritis of unspecified ankle and foot with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.69 | Rheumatoid arthritis of multiple sites with involvement of other organs and systems | Diagnosis | ICD-10-CM |
| M05.7 | Rheumatoid arthritis with rheumatoid factor without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.70 | Rheumatoid arthritis with rheumatoid factor of unspecified site without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.71 | Rheumatoid arthritis with rheumatoid factor of shoulder without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.711 | Rheumatoid arthritis with rheumatoid factor of right shoulder without organ or systems involvement | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------------|--|----------------------|------------------|
| M05.712 | Rheumatoid arthritis with rheumatoid factor of left shoulder without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.719 | Rheumatoid arthritis with rheumatoid factor of unspecified shoulder without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.72 | Rheumatoid arthritis with rheumatoid factor of elbow without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.721 | Rheumatoid arthritis with rheumatoid factor of right elbow without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.722 | Rheumatoid arthritis with rheumatoid factor of left elbow without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.729 | Rheumatoid arthritis with rheumatoid factor of unspecified elbow without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.73 | Rheumatoid arthritis with rheumatoid factor of wrist without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.731 | Rheumatoid arthritis with rheumatoid factor of right wrist without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.732 | Rheumatoid arthritis with rheumatoid factor of left wrist without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.739 | Rheumatoid arthritis with rheumatoid factor of unspecified wrist without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.74 | Rheumatoid arthritis with rheumatoid factor of hand without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.741 | Rheumatoid arthritis with rheumatoid factor of right hand without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.742 | Rheumatoid arthritis with rheumatoid factor of left hand without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.749 | Rheumatoid arthritis with rheumatoid factor of unspecified hand without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.75 | Rheumatoid arthritis with rheumatoid factor of hip without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.751 | Rheumatoid arthritis with rheumatoid factor of right hip without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.752 | Rheumatoid arthritis with rheumatoid factor of left hip without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.759 | Rheumatoid arthritis with rheumatoid factor of unspecified hip without organ or systems involvement | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------------|--|----------------------|------------------|
| M05.76 | Rheumatoid arthritis with rheumatoid factor of knee without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.761 | Rheumatoid arthritis with rheumatoid factor of right knee without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.762 | Rheumatoid arthritis with rheumatoid factor of left knee without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.769 | Rheumatoid arthritis with rheumatoid factor of unspecified knee without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.77 | Rheumatoid arthritis with rheumatoid factor of ankle and foot without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.771 | Rheumatoid arthritis with rheumatoid factor of right ankle and foot without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.772 | Rheumatoid arthritis with rheumatoid factor of left ankle and foot without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.779 | Rheumatoid arthritis with rheumatoid factor of unspecified ankle and foot without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.79 | Rheumatoid arthritis with rheumatoid factor of multiple sites without organ or systems involvement | Diagnosis | ICD-10-CM |
| M05.8 | Other rheumatoid arthritis with rheumatoid factor | Diagnosis | ICD-10-CM |
| M05.80 | Other rheumatoid arthritis with rheumatoid factor of unspecified site | Diagnosis | ICD-10-CM |
| M05.81 | Other rheumatoid arthritis with rheumatoid factor of shoulder | Diagnosis | ICD-10-CM |
| M05.811 | Other rheumatoid arthritis with rheumatoid factor of right shoulder | Diagnosis | ICD-10-CM |
| M05.812 | Other rheumatoid arthritis with rheumatoid factor of left shoulder | Diagnosis | ICD-10-CM |
| M05.819 | Other rheumatoid arthritis with rheumatoid factor of unspecified shoulder | Diagnosis | ICD-10-CM |
| M05.82 | Other rheumatoid arthritis with rheumatoid factor of elbow | Diagnosis | ICD-10-CM |
| M05.821 | Other rheumatoid arthritis with rheumatoid factor of right elbow | Diagnosis | ICD-10-CM |
| M05.822 | Other rheumatoid arthritis with rheumatoid factor of left elbow | Diagnosis | ICD-10-CM |
| M05.829 | Other rheumatoid arthritis with rheumatoid factor of unspecified elbow | Diagnosis | ICD-10-CM |
| M05.83 | Other rheumatoid arthritis with rheumatoid factor of wrist | Diagnosis | ICD-10-CM |
| M05.831 | Other rheumatoid arthritis with rheumatoid factor of right wrist | Diagnosis | ICD-10-CM |
| M05.832 | Other rheumatoid arthritis with rheumatoid factor of left wrist | Diagnosis | ICD-10-CM |
| M05.839 | Other rheumatoid arthritis with rheumatoid factor of unspecified wrist | Diagnosis | ICD-10-CM |
| M05.84 | Other rheumatoid arthritis with rheumatoid factor of hand | Diagnosis | ICD-10-CM |
| M05.841 | Other rheumatoid arthritis with rheumatoid factor of right hand | Diagnosis | ICD-10-CM |
| M05.842 | Other rheumatoid arthritis with rheumatoid factor of left hand | Diagnosis | ICD-10-CM |
| M05.849 | Other rheumatoid arthritis with rheumatoid factor of unspecified hand | Diagnosis | ICD-10-CM |
| M05.85 | Other rheumatoid arthritis with rheumatoid factor of hip | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| M05.851 | Other rheumatoid arthritis with rheumatoid factor of right hip | Diagnosis | ICD-10-CM |
| M05.852 | Other rheumatoid arthritis with rheumatoid factor of left hip | Diagnosis | ICD-10-CM |
| M05.859 | Other rheumatoid arthritis with rheumatoid factor of unspecified hip | Diagnosis | ICD-10-CM |
| M05.86 | Other rheumatoid arthritis with rheumatoid factor of knee | Diagnosis | ICD-10-CM |
| M05.861 | Other rheumatoid arthritis with rheumatoid factor of right knee | Diagnosis | ICD-10-CM |
| M05.862 | Other rheumatoid arthritis with rheumatoid factor of left knee | Diagnosis | ICD-10-CM |
| M05.869 | Other rheumatoid arthritis with rheumatoid factor of unspecified knee | Diagnosis | ICD-10-CM |
| M05.87 | Other rheumatoid arthritis with rheumatoid factor of ankle and foot | Diagnosis | ICD-10-CM |
| M05.871 | Other rheumatoid arthritis with rheumatoid factor of right ankle and foot | Diagnosis | ICD-10-CM |
| M05.872 | Other rheumatoid arthritis with rheumatoid factor of left ankle and foot | Diagnosis | ICD-10-CM |
| M05.879 | Other rheumatoid arthritis with rheumatoid factor of unspecified ankle and foot | Diagnosis | ICD-10-CM |
| M05.89 | Other rheumatoid arthritis with rheumatoid factor of multiple sites | Diagnosis | ICD-10-CM |
| M05.9 | Rheumatoid arthritis with rheumatoid factor, unspecified | Diagnosis | ICD-10-CM |
| M06.0 | Rheumatoid arthritis without rheumatoid factor | Diagnosis | ICD-10-CM |
| M06.00 | Rheumatoid arthritis without rheumatoid factor, unspecified site | Diagnosis | ICD-10-CM |
| M06.01 | Rheumatoid arthritis without rheumatoid factor, shoulder | Diagnosis | ICD-10-CM |
| M06.011 | Rheumatoid arthritis without rheumatoid factor, right shoulder | Diagnosis | ICD-10-CM |
| M06.012 | Rheumatoid arthritis without rheumatoid factor, left shoulder | Diagnosis | ICD-10-CM |
| M06.019 | Rheumatoid arthritis without rheumatoid factor, unspecified shoulder | Diagnosis | ICD-10-CM |
| M06.02 | Rheumatoid arthritis without rheumatoid factor, elbow | Diagnosis | ICD-10-CM |
| M06.021 | Rheumatoid arthritis without rheumatoid factor, right elbow | Diagnosis | ICD-10-CM |
| M06.022 | Rheumatoid arthritis without rheumatoid factor, left elbow | Diagnosis | ICD-10-CM |
| M06.029 | Rheumatoid arthritis without rheumatoid factor, unspecified elbow | Diagnosis | ICD-10-CM |
| M06.03 | Rheumatoid arthritis without rheumatoid factor, wrist | Diagnosis | ICD-10-CM |
| M06.031 | Rheumatoid arthritis without rheumatoid factor, right wrist | Diagnosis | ICD-10-CM |
| M06.032 | Rheumatoid arthritis without rheumatoid factor, left wrist | Diagnosis | ICD-10-CM |
| M06.039 | Rheumatoid arthritis without rheumatoid factor, unspecified wrist | Diagnosis | ICD-10-CM |
| M06.04 | Rheumatoid arthritis without rheumatoid factor, hand | Diagnosis | ICD-10-CM |
| M06.041 | Rheumatoid arthritis without rheumatoid factor, right hand | Diagnosis | ICD-10-CM |
| M06.042 | Rheumatoid arthritis without rheumatoid factor, left hand | Diagnosis | ICD-10-CM |
| M06.049 | Rheumatoid arthritis without rheumatoid factor, unspecified hand | Diagnosis | ICD-10-CM |
| M06.05 | Rheumatoid arthritis without rheumatoid factor, hip | Diagnosis | ICD-10-CM |
| M06.051 | Rheumatoid arthritis without rheumatoid factor, right hip | Diagnosis | ICD-10-CM |
| M06.052 | Rheumatoid arthritis without rheumatoid factor, left hip | Diagnosis | ICD-10-CM |
| M06.059 | Rheumatoid arthritis without rheumatoid factor, unspecified hip | Diagnosis | ICD-10-CM |
| M06.06 | Rheumatoid arthritis without rheumatoid factor, knee | Diagnosis | ICD-10-CM |
| M06.061 | Rheumatoid arthritis without rheumatoid factor, right knee | Diagnosis | ICD-10-CM |
| M06.062 | Rheumatoid arthritis without rheumatoid factor, left knee | Diagnosis | ICD-10-CM |
| M06.069 | Rheumatoid arthritis without rheumatoid factor, unspecified knee | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| M06.07 | Rheumatoid arthritis without rheumatoid factor, ankle and foot | Diagnosis | ICD-10-CM |
| M06.071 | Rheumatoid arthritis without rheumatoid factor, right ankle and foot | Diagnosis | ICD-10-CM |
| M06.072 | Rheumatoid arthritis without rheumatoid factor, left ankle and foot | Diagnosis | ICD-10-CM |
| M06.079 | Rheumatoid arthritis without rheumatoid factor, unspecified ankle and foot | Diagnosis | ICD-10-CM |
| M06.08 | Rheumatoid arthritis without rheumatoid factor, vertebrae | Diagnosis | ICD-10-CM |
| M06.09 | Rheumatoid arthritis without rheumatoid factor, multiple sites | Diagnosis | ICD-10-CM |
| M06.1 | Adult-onset Still's disease | Diagnosis | ICD-10-CM |
| M06.2 | Rheumatoid bursitis | Diagnosis | ICD-10-CM |
| M06.20 | Rheumatoid bursitis, unspecified site | Diagnosis | ICD-10-CM |
| M06.21 | Rheumatoid bursitis, shoulder | Diagnosis | ICD-10-CM |
| M06.211 | Rheumatoid bursitis, right shoulder | Diagnosis | ICD-10-CM |
| M06.212 | Rheumatoid bursitis, left shoulder | Diagnosis | ICD-10-CM |
| M06.219 | Rheumatoid bursitis, unspecified shoulder | Diagnosis | ICD-10-CM |
| M06.22 | Rheumatoid bursitis, elbow | Diagnosis | ICD-10-CM |
| M06.221 | Rheumatoid bursitis, right elbow | Diagnosis | ICD-10-CM |
| M06.222 | Rheumatoid bursitis, left elbow | Diagnosis | ICD-10-CM |
| M06.229 | Rheumatoid bursitis, unspecified elbow | Diagnosis | ICD-10-CM |
| M06.23 | Rheumatoid bursitis, wrist | Diagnosis | ICD-10-CM |
| M06.231 | Rheumatoid bursitis, right wrist | Diagnosis | ICD-10-CM |
| M06.232 | Rheumatoid bursitis, left wrist | Diagnosis | ICD-10-CM |
| M06.239 | Rheumatoid bursitis, unspecified wrist | Diagnosis | ICD-10-CM |
| M06.24 | Rheumatoid bursitis, hand | Diagnosis | ICD-10-CM |
| M06.241 | Rheumatoid bursitis, right hand | Diagnosis | ICD-10-CM |
| M06.242 | Rheumatoid bursitis, left hand | Diagnosis | ICD-10-CM |
| M06.249 | Rheumatoid bursitis, unspecified hand | Diagnosis | ICD-10-CM |
| M06.25 | Rheumatoid bursitis, hip | Diagnosis | ICD-10-CM |
| M06.251 | Rheumatoid bursitis, right hip | Diagnosis | ICD-10-CM |
| M06.252 | Rheumatoid bursitis, left hip | Diagnosis | ICD-10-CM |
| M06.259 | Rheumatoid bursitis, unspecified hip | Diagnosis | ICD-10-CM |
| M06.26 | Rheumatoid bursitis, knee | Diagnosis | ICD-10-CM |
| M06.261 | Rheumatoid bursitis, right knee | Diagnosis | ICD-10-CM |
| M06.262 | Rheumatoid bursitis, left knee | Diagnosis | ICD-10-CM |
| M06.269 | Rheumatoid bursitis, unspecified knee | Diagnosis | ICD-10-CM |
| M06.27 | Rheumatoid bursitis, ankle and foot | Diagnosis | ICD-10-CM |
| M06.271 | Rheumatoid bursitis, right ankle and foot | Diagnosis | ICD-10-CM |
| M06.272 | Rheumatoid bursitis, left ankle and foot | Diagnosis | ICD-10-CM |
| M06.279 | Rheumatoid bursitis, unspecified ankle and foot | Diagnosis | ICD-10-CM |
| M06.28 | Rheumatoid bursitis, vertebrae | Diagnosis | ICD-10-CM |
| M06.29 | Rheumatoid bursitis, multiple sites | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| M06.3 | Rheumatoid nodule | Diagnosis | ICD-10-CM |
| M06.30 | Rheumatoid nodule, unspecified site | Diagnosis | ICD-10-CM |
| M06.31 | Rheumatoid nodule, shoulder | Diagnosis | ICD-10-CM |
| M06.311 | Rheumatoid nodule, right shoulder | Diagnosis | ICD-10-CM |
| M06.312 | Rheumatoid nodule, left shoulder | Diagnosis | ICD-10-CM |
| M06.319 | Rheumatoid nodule, unspecified shoulder | Diagnosis | ICD-10-CM |
| M06.32 | Rheumatoid nodule, elbow | Diagnosis | ICD-10-CM |
| M06.321 | Rheumatoid nodule, right elbow | Diagnosis | ICD-10-CM |
| M06.322 | Rheumatoid nodule, left elbow | Diagnosis | ICD-10-CM |
| M06.329 | Rheumatoid nodule, unspecified elbow | Diagnosis | ICD-10-CM |
| M06.33 | Rheumatoid nodule, wrist | Diagnosis | ICD-10-CM |
| M06.331 | Rheumatoid nodule, right wrist | Diagnosis | ICD-10-CM |
| M06.332 | Rheumatoid nodule, left wrist | Diagnosis | ICD-10-CM |
| M06.339 | Rheumatoid nodule, unspecified wrist | Diagnosis | ICD-10-CM |
| M06.34 | Rheumatoid nodule, hand | Diagnosis | ICD-10-CM |
| M06.341 | Rheumatoid nodule, right hand | Diagnosis | ICD-10-CM |
| M06.342 | Rheumatoid nodule, left hand | Diagnosis | ICD-10-CM |
| M06.349 | Rheumatoid nodule, unspecified hand | Diagnosis | ICD-10-CM |
| M06.35 | Rheumatoid nodule, hip | Diagnosis | ICD-10-CM |
| M06.351 | Rheumatoid nodule, right hip | Diagnosis | ICD-10-CM |
| M06.352 | Rheumatoid nodule, left hip | Diagnosis | ICD-10-CM |
| M06.359 | Rheumatoid nodule, unspecified hip | Diagnosis | ICD-10-CM |
| M06.36 | Rheumatoid nodule, knee | Diagnosis | ICD-10-CM |
| M06.361 | Rheumatoid nodule, right knee | Diagnosis | ICD-10-CM |
| M06.362 | Rheumatoid nodule, left knee | Diagnosis | ICD-10-CM |
| M06.369 | Rheumatoid nodule, unspecified knee | Diagnosis | ICD-10-CM |
| M06.37 | Rheumatoid nodule, ankle and foot | Diagnosis | ICD-10-CM |
| M06.371 | Rheumatoid nodule, right ankle and foot | Diagnosis | ICD-10-CM |
| M06.372 | Rheumatoid nodule, left ankle and foot | Diagnosis | ICD-10-CM |
| M06.379 | Rheumatoid nodule, unspecified ankle and foot | Diagnosis | ICD-10-CM |
| M06.38 | Rheumatoid nodule, vertebrae | Diagnosis | ICD-10-CM |
| M06.39 | Rheumatoid nodule, multiple sites | Diagnosis | ICD-10-CM |
| M06.4 | Inflammatory polyarthropathy | Diagnosis | ICD-10-CM |
| M06.8 | Other specified rheumatoid arthritis | Diagnosis | ICD-10-CM |
| M06.80 | Other specified rheumatoid arthritis, unspecified site | Diagnosis | ICD-10-CM |
| M06.81 | Other specified rheumatoid arthritis, shoulder | Diagnosis | ICD-10-CM |
| M06.811 | Other specified rheumatoid arthritis, right shoulder | Diagnosis | ICD-10-CM |
| M06.812 | Other specified rheumatoid arthritis, left shoulder | Diagnosis | ICD-10-CM |
| M06.819 | Other specified rheumatoid arthritis, unspecified shoulder | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| M06.82 | Other specified rheumatoid arthritis, elbow | Diagnosis | ICD-10-CM |
| M06.821 | Other specified rheumatoid arthritis, right elbow | Diagnosis | ICD-10-CM |
| M06.822 | Other specified rheumatoid arthritis, left elbow | Diagnosis | ICD-10-CM |
| M06.829 | Other specified rheumatoid arthritis, unspecified elbow | Diagnosis | ICD-10-CM |
| M06.83 | Other specified rheumatoid arthritis, wrist | Diagnosis | ICD-10-CM |
| M06.831 | Other specified rheumatoid arthritis, right wrist | Diagnosis | ICD-10-CM |
| M06.832 | Other specified rheumatoid arthritis, left wrist | Diagnosis | ICD-10-CM |
| M06.839 | Other specified rheumatoid arthritis, unspecified wrist | Diagnosis | ICD-10-CM |
| M06.84 | Other specified rheumatoid arthritis, hand | Diagnosis | ICD-10-CM |
| M06.841 | Other specified rheumatoid arthritis, right hand | Diagnosis | ICD-10-CM |
| M06.842 | Other specified rheumatoid arthritis, left hand | Diagnosis | ICD-10-CM |
| M06.849 | Other specified rheumatoid arthritis, unspecified hand | Diagnosis | ICD-10-CM |
| M06.85 | Other specified rheumatoid arthritis, hip | Diagnosis | ICD-10-CM |
| M06.851 | Other specified rheumatoid arthritis, right hip | Diagnosis | ICD-10-CM |
| M06.852 | Other specified rheumatoid arthritis, left hip | Diagnosis | ICD-10-CM |
| M06.859 | Other specified rheumatoid arthritis, unspecified hip | Diagnosis | ICD-10-CM |
| M06.86 | Other specified rheumatoid arthritis, knee | Diagnosis | ICD-10-CM |
| M06.861 | Other specified rheumatoid arthritis, right knee | Diagnosis | ICD-10-CM |
| M06.862 | Other specified rheumatoid arthritis, left knee | Diagnosis | ICD-10-CM |
| M06.869 | Other specified rheumatoid arthritis, unspecified knee | Diagnosis | ICD-10-CM |
| M06.87 | Other specified rheumatoid arthritis, ankle and foot | Diagnosis | ICD-10-CM |
| M06.871 | Other specified rheumatoid arthritis, right ankle and foot | Diagnosis | ICD-10-CM |
| M06.872 | Other specified rheumatoid arthritis, left ankle and foot | Diagnosis | ICD-10-CM |
| M06.879 | Other specified rheumatoid arthritis, unspecified ankle and foot | Diagnosis | ICD-10-CM |
| M06.88 | Other specified rheumatoid arthritis, vertebrae | Diagnosis | ICD-10-CM |
| M06.89 | Other specified rheumatoid arthritis, multiple sites | Diagnosis | ICD-10-CM |
| M06.9 | Rheumatoid arthritis, unspecified | Diagnosis | ICD-10-CM |
| M08.3 | Juvenile rheumatoid polyarthritis (seronegative) | Diagnosis | ICD-10-CM |
| M08.40 | Pauciarticular juvenile rheumatoid arthritis, unspecified site | Diagnosis | ICD-10-CM |
| M12.00 | Chronic postrheumatic arthropathy [Jaccoud], unspecified site | Diagnosis | ICD-10-CM |
| M30.0 | Polyarteritis nodosa | Diagnosis | ICD-10-CM |
| M30.1 | Polyarteritis with lung involvement [Churg-Strauss] | Diagnosis | ICD-10-CM |
| M30.2 | Juvenile polyarteritis | Diagnosis | ICD-10-CM |
| M30.3 | Mucocutaneous lymph node syndrome [Kawasaki] | Diagnosis | ICD-10-CM |
| M30.8 | Other conditions related to polyarteritis nodosa | Diagnosis | ICD-10-CM |
| M31.0 | Hypersensitivity angiitis | Diagnosis | ICD-10-CM |
| M31.1 | Thrombotic microangiopathy | Diagnosis | ICD-10-CM |
| M31.2 | Lethal midline granuloma | Diagnosis | ICD-10-CM |
| M31.30 | Wegener's granulomatosis without renal involvement | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| M31.31 | Wegener's granulomatosis with renal involvement | Diagnosis | ICD-10-CM |
| M31.4 | Aortic arch syndrome [Takayasu] | Diagnosis | ICD-10-CM |
| M31.5 | Giant cell arteritis with polymyalgia rheumatica | Diagnosis | ICD-10-CM |
| M31.6 | Other giant cell arteritis | Diagnosis | ICD-10-CM |
| M31.7 | Microscopic polyangiitis | Diagnosis | ICD-10-CM |
| M31.8 | Other specified necrotizing vasculopathies | Diagnosis | ICD-10-CM |
| M31.9 | Necrotizing vasculopathy, unspecified | Diagnosis | ICD-10-CM |
| M32.0 | Drug-induced systemic lupus erythematosus | Diagnosis | ICD-10-CM |
| M32.10 | Systemic lupus erythematosus, organ or system involvement unspecified | Diagnosis | ICD-10-CM |
| M32.11 | Endocarditis in systemic lupus erythematosus | Diagnosis | ICD-10-CM |
| M32.12 | Pericarditis in systemic lupus erythematosus | Diagnosis | ICD-10-CM |
| M32.13 | Lung involvement in systemic lupus erythematosus | Diagnosis | ICD-10-CM |
| M32.14 | Glomerular disease in systemic lupus erythematosus | Diagnosis | ICD-10-CM |
| M32.15 | Tubulo-interstitial nephropathy in systemic lupus erythematosus | Diagnosis | ICD-10-CM |
| M32.19 | Other organ or system involvement in systemic lupus erythematosus | Diagnosis | ICD-10-CM |
| M32.8 | Other forms of systemic lupus erythematosus | Diagnosis | ICD-10-CM |
| M32.9 | Systemic lupus erythematosus, unspecified | Diagnosis | ICD-10-CM |
| M33.00 | Juvenile dermatomyositis, organ involvement unspecified | Diagnosis | ICD-10-CM |
| M33.01 | Juvenile dermatomyositis with respiratory involvement | Diagnosis | ICD-10-CM |
| M33.02 | Juvenile dermatomyositis with myopathy | Diagnosis | ICD-10-CM |
| M33.09 | Juvenile dermatomyositis with other organ involvement | Diagnosis | ICD-10-CM |
| M33.10 | Other dermatomyositis, organ involvement unspecified | Diagnosis | ICD-10-CM |
| M33.11 | Other dermatomyositis with respiratory involvement | Diagnosis | ICD-10-CM |
| M33.12 | Other dermatomyositis with myopathy | Diagnosis | ICD-10-CM |
| M33.13 | Other dermatomyositis without myopathy | Diagnosis | ICD-10-CM |
| M33.19 | Other dermatomyositis with other organ involvement | Diagnosis | ICD-10-CM |
| M33.20 | Polymyositis, organ involvement unspecified | Diagnosis | ICD-10-CM |
| M33.21 | Polymyositis with respiratory involvement | Diagnosis | ICD-10-CM |
| M33.22 | Polymyositis with myopathy | Diagnosis | ICD-10-CM |
| M33.29 | Polymyositis with other organ involvement | Diagnosis | ICD-10-CM |
| M33.90 | Dermatopolymyositis, unspecified, organ involvement unspecified | Diagnosis | ICD-10-CM |
| M33.91 | Dermatopolymyositis, unspecified with respiratory involvement | Diagnosis | ICD-10-CM |
| M33.92 | Dermatopolymyositis, unspecified with myopathy | Diagnosis | ICD-10-CM |
| M33.93 | Dermatopolymyositis, unspecified without myopathy | Diagnosis | ICD-10-CM |
| M33.99 | Dermatopolymyositis, unspecified with other organ involvement | Diagnosis | ICD-10-CM |
| M34.0 | Progressive systemic sclerosis | Diagnosis | ICD-10-CM |
| M34.1 | CR(E)ST syndrome | Diagnosis | ICD-10-CM |
| M34.2 | Systemic sclerosis induced by drug and chemical | Diagnosis | ICD-10-CM |
| M34.81 | Systemic sclerosis with lung involvement | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| M34.82 | Systemic sclerosis with myopathy | Diagnosis | ICD-10-CM |
| M34.83 | Systemic sclerosis with polyneuropathy | Diagnosis | ICD-10-CM |
| M34.89 | Other systemic sclerosis | Diagnosis | ICD-10-CM |
| M34.9 | Systemic sclerosis, unspecified | Diagnosis | ICD-10-CM |
| M35.00 | Sicca syndrome, unspecified | Diagnosis | ICD-10-CM |
| M35.01 | Sicca syndrome with keratoconjunctivitis | Diagnosis | ICD-10-CM |
| M35.02 | Sicca syndrome with lung involvement | Diagnosis | ICD-10-CM |
| M35.03 | Sicca syndrome with myopathy | Diagnosis | ICD-10-CM |
| M35.04 | Sicca syndrome with tubulo-interstitial nephropathy | Diagnosis | ICD-10-CM |
| M35.09 | Sicca syndrome with other organ involvement | Diagnosis | ICD-10-CM |
| M35.1 | Other overlap syndromes | Diagnosis | ICD-10-CM |
| M35.2 | Behcet's disease | Diagnosis | ICD-10-CM |
| M35.3 | Polymyalgia rheumatica | Diagnosis | ICD-10-CM |
| M35.4 | Diffuse (eosinophilic) fasciitis | Diagnosis | ICD-10-CM |
| M35.5 | Multifocal fibrosclerosis | Diagnosis | ICD-10-CM |
| M35.6 | Relapsing panniculitis [Weber-Christian] | Diagnosis | ICD-10-CM |
| M35.8 | Other specified systemic involvement of connective tissue | Diagnosis | ICD-10-CM |
| M35.9 | Systemic involvement of connective tissue, unspecified | Diagnosis | ICD-10-CM |
| M36.0 | Dermato(poly)myositis in neoplastic disease | Diagnosis | ICD-10-CM |
| M36.8 | Systemic disorders of connective tissue in other diseases classified elsewhere | Diagnosis | ICD-10-CM |
| M46.00 | Spinal enthesopathy, site unspecified | Diagnosis | ICD-10-CM |
| M46.01 | Spinal enthesopathy, occipito-atlanto-axial region | Diagnosis | ICD-10-CM |
| M46.02 | Spinal enthesopathy, cervical region | Diagnosis | ICD-10-CM |
| M46.03 | Spinal enthesopathy, cervicothoracic region | Diagnosis | ICD-10-CM |
| M46.04 | Spinal enthesopathy, thoracic region | Diagnosis | ICD-10-CM |
| M46.05 | Spinal enthesopathy, thoracolumbar region | Diagnosis | ICD-10-CM |
| M46.06 | Spinal enthesopathy, lumbar region | Diagnosis | ICD-10-CM |
| M46.07 | Spinal enthesopathy, lumbosacral region | Diagnosis | ICD-10-CM |
| M46.08 | Spinal enthesopathy, sacral and sacrococcygeal region | Diagnosis | ICD-10-CM |
| M46.09 | Spinal enthesopathy, multiple sites in spine | Diagnosis | ICD-10-CM |
| M46.1 | Sacroiliitis, not elsewhere classified | Diagnosis | ICD-10-CM |
| N00.0 | Acute nephritic syndrome with minor glomerular abnormality | Diagnosis | ICD-10-CM |
| N00.1 | Acute nephritic syndrome with focal and segmental glomerular lesions | Diagnosis | ICD-10-CM |
| N00.2 | Acute nephritic syndrome with diffuse membranous glomerulonephritis | Diagnosis | ICD-10-CM |
| N00.3 | Acute nephritic syndrome with diffuse mesangial proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N00.4 | Acute nephritic syndrome with diffuse endocapillary proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N00.5 | Acute nephritic syndrome with diffuse mesangiocapillary glomerulonephritis | Diagnosis | ICD-10-CM |
| N00.6 | Acute nephritic syndrome with dense deposit disease | Diagnosis | ICD-10-CM |
| N00.7 | Acute nephritic syndrome with diffuse crescentic glomerulonephritis | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------|--|---------------|-----------|
| N00.8 | Acute nephritic syndrome with other morphologic changes | Diagnosis | ICD-10-CM |
| N00.9 | Acute nephritic syndrome with unspecified morphologic changes | Diagnosis | ICD-10-CM |
| N01.0 | Rapidly progressive nephritic syndrome with minor glomerular abnormality | Diagnosis | ICD-10-CM |
| N01.1 | Rapidly progressive nephritic syndrome with focal and segmental glomerular lesions | Diagnosis | ICD-10-CM |
| N01.2 | Rapidly progressive nephritic syndrome with diffuse membranous glomerulonephritis | Diagnosis | ICD-10-CM |
| N01.3 | Rapidly progressive nephritic syndrome with diffuse mesangial proliferative | Diagnosis | ICD-10-CM |
| N01.4 | Rapidly progressive nephritic syndrome with diffuse endocapillary proliferative | Diagnosis | ICD-10-CM |
| N01.5 | Rapidly progressive nephritic syndrome with diffuse mesangiocapillary | Diagnosis | ICD-10-CM |
| N01.6 | Rapidly progressive nephritic syndrome with dense deposit disease | Diagnosis | ICD-10-CM |
| N01.7 | Rapidly progressive nephritic syndrome with diffuse crescentic glomerulonephritis | Diagnosis | ICD-10-CM |
| N01.8 | Rapidly progressive nephritic syndrome with other morphologic changes | Diagnosis | ICD-10-CM |
| N01.9 | Rapidly progressive nephritic syndrome with unspecified morphologic changes | Diagnosis | ICD-10-CM |
| N02.0 | Recurrent and persistent hematuria with minor glomerular abnormality | Diagnosis | ICD-10-CM |
| N02.1 | Recurrent and persistent hematuria with focal and segmental glomerular lesions | Diagnosis | ICD-10-CM |
| N02.2 | Recurrent and persistent hematuria with diffuse membranous glomerulonephritis | Diagnosis | ICD-10-CM |
| N02.3 | Recurrent and persistent hematuria with diffuse mesangial proliferative | Diagnosis | ICD-10-CM |
| N02.4 | Recurrent and persistent hematuria with diffuse endocapillary proliferative | Diagnosis | ICD-10-CM |
| N02.5 | Recurrent and persistent hematuria with diffuse mesangiocapillary glomerulonephritis | Diagnosis | ICD-10-CM |
| N02.6 | Recurrent and persistent hematuria with dense deposit disease | Diagnosis | ICD-10-CM |
| N02.7 | Recurrent and persistent hematuria with diffuse crescentic glomerulonephritis | Diagnosis | ICD-10-CM |
| N02.8 | Recurrent and persistent hematuria with other morphologic changes | Diagnosis | ICD-10-CM |
| N02.9 | Recurrent and persistent hematuria with unspecified morphologic changes | Diagnosis | ICD-10-CM |
| N03.0 | Chronic nephritic syndrome with minor glomerular abnormality | Diagnosis | ICD-10-CM |
| N03.1 | Chronic nephritic syndrome with focal and segmental glomerular lesions | Diagnosis | ICD-10-CM |
| N03.2 | Chronic nephritic syndrome with diffuse membranous glomerulonephritis | Diagnosis | ICD-10-CM |
| N03.3 | Chronic nephritic syndrome with diffuse mesangial proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N03.4 | Chronic nephritic syndrome with diffuse endocapillary proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N03.5 | Chronic nephritic syndrome with diffuse mesangiocapillary glomerulonephritis | Diagnosis | ICD-10-CM |
| N03.6 | Chronic nephritic syndrome with dense deposit disease | Diagnosis | ICD-10-CM |
| N03.7 | Chronic nephritic syndrome with diffuse crescentic glomerulonephritis | Diagnosis | ICD-10-CM |
| N03.8 | Chronic nephritic syndrome with other morphologic changes | Diagnosis | ICD-10-CM |
| N03.9 | Chronic nephritic syndrome with unspecified morphologic changes | Diagnosis | ICD-10-CM |
| N04.0 | Nephrotic syndrome with minor glomerular abnormality | Diagnosis | ICD-10-CM |
| N04.1 | Nephrotic syndrome with focal and segmental glomerular lesions | Diagnosis | ICD-10-CM |
| N04.2 | Nephrotic syndrome with diffuse membranous glomerulonephritis | Diagnosis | ICD-10-CM |
| N04.3 | Nephrotic syndrome with diffuse mesangial proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N04.4 | Nephrotic syndrome with diffuse endocapillary proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N04.5 | Nephrotic syndrome with diffuse mesangiocapillary glomerulonephritis | Diagnosis | ICD-10-CM |
| N04.6 | Nephrotic syndrome with dense deposit disease | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------|---|---------------|-----------|
| N04.7 | Nephrotic syndrome with diffuse crescentic glomerulonephritis | Diagnosis | ICD-10-CM |
| N04.8 | Nephrotic syndrome with other morphologic changes | Diagnosis | ICD-10-CM |
| N04.9 | Nephrotic syndrome with unspecified morphologic changes | Diagnosis | ICD-10-CM |
| N05.0 | Unspecified nephritic syndrome with minor glomerular abnormality | Diagnosis | ICD-10-CM |
| N05.1 | Unspecified nephritic syndrome with focal and segmental glomerular lesions | Diagnosis | ICD-10-CM |
| N05.2 | Unspecified nephritic syndrome with diffuse membranous glomerulonephritis | Diagnosis | ICD-10-CM |
| N05.3 | Unspecified nephritic syndrome with diffuse mesangial proliferative | Diagnosis | ICD-10-CM |
| N05.4 | Unspecified nephritic syndrome with diffuse endocapillary proliferative | Diagnosis | ICD-10-CM |
| N05.5 | Unspecified nephritic syndrome with diffuse mesangiocapillary glomerulonephritis | Diagnosis | ICD-10-CM |
| N05.6 | Unspecified nephritic syndrome with dense deposit disease | Diagnosis | ICD-10-CM |
| N05.7 | Unspecified nephritic syndrome with diffuse crescentic glomerulonephritis | Diagnosis | ICD-10-CM |
| N05.8 | Unspecified nephritic syndrome with other morphologic changes | Diagnosis | ICD-10-CM |
| N05.9 | Unspecified nephritic syndrome with unspecified morphologic changes | Diagnosis | ICD-10-CM |
| N06.0 | Isolated proteinuria with minor glomerular abnormality | Diagnosis | ICD-10-CM |
| N06.1 | Isolated proteinuria with focal and segmental glomerular lesions | Diagnosis | ICD-10-CM |
| N06.2 | Isolated proteinuria with diffuse membranous glomerulonephritis | Diagnosis | ICD-10-CM |
| N06.3 | Isolated proteinuria with diffuse mesangial proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N06.4 | Isolated proteinuria with diffuse endocapillary proliferative glomerulonephritis | Diagnosis | ICD-10-CM |
| N06.5 | Isolated proteinuria with diffuse mesangiocapillary glomerulonephritis | Diagnosis | ICD-10-CM |
| N06.6 | Isolated proteinuria with dense deposit disease | Diagnosis | ICD-10-CM |
| N06.7 | Isolated proteinuria with diffuse crescentic glomerulonephritis | Diagnosis | ICD-10-CM |
| N06.8 | Isolated proteinuria with other morphologic lesion | Diagnosis | ICD-10-CM |
| N06.9 | Isolated proteinuria with unspecified morphologic lesion | Diagnosis | ICD-10-CM |
| N07.0 | Hereditary nephropathy, not elsewhere classified with minor glomerular abnormality | Diagnosis | ICD-10-CM |
| N07.1 | Hereditary nephropathy, not elsewhere classified with focal and segmental glomerular | Diagnosis | ICD-10-CM |
| N07.2 | Hereditary nephropathy, not elsewhere classified with diffuse membranous | Diagnosis | ICD-10-CM |
| N07.3 | Hereditary nephropathy, not elsewhere classified with diffuse mesangial proliferative | Diagnosis | ICD-10-CM |
| N07.4 | Hereditary nephropathy, not elsewhere classified with diffuse endocapillary | Diagnosis | ICD-10-CM |
| N07.5 | Hereditary nephropathy, not elsewhere classified with diffuse mesangiocapillary | Diagnosis | ICD-10-CM |
| N07.6 | Hereditary nephropathy, not elsewhere classified with dense deposit disease | Diagnosis | ICD-10-CM |
| N07.7 | Hereditary nephropathy, not elsewhere classified with diffuse crescentic | Diagnosis | ICD-10-CM |
| N07.8 | Hereditary nephropathy, not elsewhere classified with other morphologic lesions | Diagnosis | ICD-10-CM |
| N07.9 | Hereditary nephropathy, not elsewhere classified with unspecified morphologic lesions | Diagnosis | ICD-10-CM |
| N08 | Glomerular disorders in diseases classified elsewhere | Diagnosis | ICD-10-CM |
| N14.0 | Analgesic nephropathy | Diagnosis | ICD-10-CM |
| N14.1 | Nephropathy induced by other drugs, medicaments and biological substances | Diagnosis | ICD-10-CM |
| N14.2 | Nephropathy induced by unspecified drug, medicament or biological substance | Diagnosis | ICD-10-CM |
| N14.3 | Nephropathy induced by heavy metals | Diagnosis | ICD-10-CM |
| N14.4 | Toxic nephropathy, not elsewhere classified | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| N15.0 | Balkan nephropathy | Diagnosis | ICD-10-CM |
| N15.8 | Other specified renal tubulo-interstitial diseases | Diagnosis | ICD-10-CM |
| N15.9 | Renal tubulo-interstitial disease, unspecified | Diagnosis | ICD-10-CM |
| N16 | Renal tubulo-interstitial disorders in diseases classified elsewhere | Diagnosis | ICD-10-CM |
| N17.1 | Acute kidney failure with acute cortical necrosis | Diagnosis | ICD-10-CM |
| N17.2 | Acute kidney failure with medullary necrosis | Diagnosis | ICD-10-CM |
| N18.5 | Chronic kidney disease, stage 5 | Diagnosis | ICD-10-CM |
| N18.6 | End stage renal disease | Diagnosis | ICD-10-CM |
| Q2010 | Injection, glatiramer acetate, per dose | Procedure | HCPCS |
| Q2012 | Injection, pegademase bovine, 25 IU | Procedure | HCPCS |
| Q2019 | Injection, basiliximab, 20 mg | Procedure | HCPCS |
| Q2025 | Fludarabine phosphate, oral, 1 mg | Procedure | HCPCS |
| Q2043 | Sipuleucel-T, minimum of 50 million autologous CD54+ cells activated with PAP-GM- | Procedure | HCPCS |
| Q2044 | Injection, belimumab, 10 mg | Procedure | HCPCS |
| Q2048 | Injection, doxorubicin hydrochloride, liposomal, DOXIL, 10 mg | Procedure | HCPCS |
| Q2049 | Injection, doxorubicin HCl, liposomal, imported Lipodox, 10 mg | Procedure | HCPCS |
| Q2050 | Injection, doxorubicin HCl, liposomal, not otherwise specified, 10 mg | Procedure | HCPCS |
| Q3025 | Injection, interferon beta-1a, 11 mcg for intramuscular use | Procedure | HCPCS |
| Q3026 | Injection, interferon beta-1a, 11 mcg for subcutaneous use | Procedure | HCPCS |
| Q3027 | Injection, interferon beta-1a, 1 mcg for intramuscular use | Procedure | HCPCS |
| Q3028 | Injection, interferon beta-1a, 1 mcg for subcutaneous use | Procedure | HCPCS |
| Q4079 | Injection, natalizumab, 1 mg | Procedure | HCPCS |
| Q5102 | Injection, infliximab, biosimilar, 10 mg | Procedure | HCPCS |
| Q5103 | Injection, infliximab-dyyb, biosimilar, (Inflectra), 10 mg | Procedure | HCPCS |
| Q5104 | Injection, infliximab-abda, biosimilar, (Renflexis), 10 mg | Procedure | HCPCS |
| Q5107 | Injection, bevacizumab-awwb, biosimilar, (Mvasi), 10 mg | Procedure | HCPCS |
| Q5109 | Injection, infliximab-qbtx, biosimilar, (Ixifi), 10 mg | Procedure | HCPCS |
| Q5112 | Injection, trastuzumab-dttb, biosimilar, (Ontruzant), 10 mg | Procedure | HCPCS |
| Q5113 | Injection, trastuzumab-pkrb, biosimilar, (Herzuma), 10 mg | Procedure | HCPCS |
| Q5114 | Injection, Trastuzumab-dkst, biosimilar, (Ogivri), 10 mg | Procedure | HCPCS |
| Q5115 | Injection, rituximab-abbs, biosimilar, (Truxima), 10 mg | Procedure | HCPCS |
| Q5116 | Injection, trastuzumab-qyyp, biosimilar, (Trazimera), 10 mg | Procedure | HCPCS |
| Q5117 | Injection, trastuzumab-anns, biosimilar, (Kanjinti), 10 mg | Procedure | HCPCS |
| Q5118 | Injection, bevacizumab-bvcr, biosimilar, (Zirabev), 10 mg | Procedure | HCPCS |
| Q5119 | Injection, rituximab-pvvr, biosimilar, (RUXIENCE), 10 mg | Procedure | HCPCS |
| Q5121 | Injection, infliximab-axxq, biosimilar, (AVSOLA), 10 mg | Procedure | HCPCS |
| Q85.00 | Neurofibromatosis, unspecified | Diagnosis | ICD-10-CM |
| Q85.01 | Neurofibromatosis, type 1 | Diagnosis | ICD-10-CM |
| Q85.02 | Neurofibromatosis, type 2 | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| Q85.03 | Schwannomatosis | Diagnosis | ICD-10-CM |
| Q85.09 | Other neurofibromatosis | Diagnosis | ICD-10-CM |
| Q89.01 | Asplenia (congenital) | Diagnosis | ICD-10-CM |
| Q89.09 | Congenital malformations of spleen | Diagnosis | ICD-10-CM |
| Q9979 | Injection, Alemtuzumab, 1 mg | Procedure | HCPCS |
| Q9989 | Ustekinumab, for intravenous injection, 1 mg | Procedure | HCPCS |
| R75 | Inconclusive laboratory evidence of human immunodeficiency virus [HIV] | Diagnosis | ICD-10-CM |
| R90.82 | White matter disease, unspecified | Diagnosis | ICD-10-CM |
| S0087 | Injection, alemtuzumab, 30 mg | Procedure | HCPCS |
| S0088 | Imatinib, 100 mg | Procedure | HCPCS |
| S0108 | Mercaptopurine, oral, 50 mg | Procedure | HCPCS |
| S0115 | Bortezomib, 3.5 mg | Procedure | HCPCS |
| S0116 | Bevacizumab, 100 mg | Procedure | HCPCS |
| S0145 | Injection, PEGylated interferon alfa-2A, 180 mcg per ml | Procedure | HCPCS |
| S0146 | Injection, pegylated interferon alfa-2b, 10 mcg per 0.5 ml | Procedure | HCPCS |
| S0148 | Injection, PEGylated interferon alfa-2B, 10 mcg | Procedure | HCPCS |
| S0162 | Injection, efalizumab, 125 mg | Procedure | HCPCS |
| S0168 | Injection, azacitidine, 100 mg | Procedure | HCPCS |
| S0172 | Chlorambucil, oral, 2 mg | Procedure | HCPCS |
| S0176 | Hydroxyurea, oral, 500 mg | Procedure | HCPCS |
| S0178 | Lomustine, oral, 10 mg | Procedure | HCPCS |
| S0182 | Procarbazine HCl, oral, 50 mg | Procedure | HCPCS |
| S0193 | Injection alefacept, 7.5 mg (includes dose packaging) | Procedure | HCPCS |
| S2053 | Transplantation of small intestine and liver allografts | Procedure | HCPCS |
| S2054 | Transplantation of multivisceral organs | Procedure | HCPCS |
| S2060 | Lobar lung transplantation | Procedure | HCPCS |
| S2065 | Simultaneous pancreas kidney transplantation | Procedure | HCPCS |
| S2142 | Cord blood-derived stem-cell transplantation, allogeneic | Procedure | HCPCS |
| S2150 | Bone marrow or blood-derived stem cells (peripheral or umbilical), allogeneic or | Procedure | HCPCS |
| S2152 | Solid organ(s), complete or segmental, single organ or combination of organs; | Procedure | HCPCS |
| T45.1X1A | Poisoning by antineoplastic and immunosuppressive drugs, accidental (unintentional), | Diagnosis | ICD-10-CM |
| T45.1X1D | Poisoning by antineoplastic and immunosuppressive drugs, accidental (unintentional), | Diagnosis | ICD-10-CM |
| T45.1X1S | Poisoning by antineoplastic and immunosuppressive drugs, accidental (unintentional), | Diagnosis | ICD-10-CM |
| T45.1X2A | Poisoning by antineoplastic and immunosuppressive drugs, intentional self-harm, | Diagnosis | ICD-10-CM |
| T45.1X2D | Poisoning by antineoplastic and immunosuppressive drugs, intentional self-harm, | Diagnosis | ICD-10-CM |
| T45.1X2S | Poisoning by antineoplastic and immunosuppressive drugs, intentional self-harm, | Diagnosis | ICD-10-CM |
| T45.1X3A | Poisoning by antineoplastic and immunosuppressive drugs, assault, initial encounter | Diagnosis | ICD-10-CM |
| T45.1X3D | Poisoning by antineoplastic and immunosuppressive drugs, assault, subsequent | Diagnosis | ICD-10-CM |
| T45.1X3S | Poisoning by antineoplastic and immunosuppressive drugs, assault, sequela | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| T45.1X4A | Poisoning by antineoplastic and immunosuppressive drugs, undetermined, initial | Diagnosis | ICD-10-CM |
| T45.1X4D | Poisoning by antineoplastic and immunosuppressive drugs, undetermined, subsequent | Diagnosis | ICD-10-CM |
| T45.1X4S | Poisoning by antineoplastic and immunosuppressive drugs, undetermined, sequela | Diagnosis | ICD-10-CM |
| T45.1X5A | Adverse effect of antineoplastic and immunosuppressive drugs, initial encounter | Diagnosis | ICD-10-CM |
| T45.1X5D | Adverse effect of antineoplastic and immunosuppressive drugs, subsequent encounter | Diagnosis | ICD-10-CM |
| T45.1X5S | Adverse effect of antineoplastic and immunosuppressive drugs, sequela | Diagnosis | ICD-10-CM |
| T80.810 | Extravasation of vesicant antineoplastic chemotherapy | Diagnosis | ICD-10-CM |
| T80.810A | Extravasation of vesicant antineoplastic chemotherapy, initial encounter | Diagnosis | ICD-10-CM |
| T80.810D | Extravasation of vesicant antineoplastic chemotherapy, subsequent encounter | Diagnosis | ICD-10-CM |
| T86.00 | Unspecified complication of bone marrow transplant | Diagnosis | ICD-10-CM |
| T86.01 | Bone marrow transplant rejection | Diagnosis | ICD-10-CM |
| T86.02 | Bone marrow transplant failure | Diagnosis | ICD-10-CM |
| T86.03 | Bone marrow transplant infection | Diagnosis | ICD-10-CM |
| T86.09 | Other complications of bone marrow transplant | Diagnosis | ICD-10-CM |
| T86.10 | Unspecified complication of kidney transplant | Diagnosis | ICD-10-CM |
| T86.11 | Kidney transplant rejection | Diagnosis | ICD-10-CM |
| T86.12 | Kidney transplant failure | Diagnosis | ICD-10-CM |
| T86.13 | Kidney transplant infection | Diagnosis | ICD-10-CM |
| T86.19 | Other complication of kidney transplant | Diagnosis | ICD-10-CM |
| T86.20 | Unspecified complication of heart transplant | Diagnosis | ICD-10-CM |
| T86.21 | Heart transplant rejection | Diagnosis | ICD-10-CM |
| T86.22 | Heart transplant failure | Diagnosis | ICD-10-CM |
| T86.23 | Heart transplant infection | Diagnosis | ICD-10-CM |
| T86.290 | Cardiac allograft vasculopathy | Diagnosis | ICD-10-CM |
| T86.298 | Other complications of heart transplant | Diagnosis | ICD-10-CM |
| T86.30 | Unspecified complication of heart-lung transplant | Diagnosis | ICD-10-CM |
| T86.31 | Heart-lung transplant rejection | Diagnosis | ICD-10-CM |
| T86.32 | Heart-lung transplant failure | Diagnosis | ICD-10-CM |
| T86.33 | Heart-lung transplant infection | Diagnosis | ICD-10-CM |
| T86.39 | Other complications of heart-lung transplant | Diagnosis | ICD-10-CM |
| T86.40 | Unspecified complication of liver transplant | Diagnosis | ICD-10-CM |
| T86.41 | Liver transplant rejection | Diagnosis | ICD-10-CM |
| T86.42 | Liver transplant failure | Diagnosis | ICD-10-CM |
| T86.43 | Liver transplant infection | Diagnosis | ICD-10-CM |
| T86.49 | Other complications of liver transplant | Diagnosis | ICD-10-CM |
| T86.810 | Lung transplant rejection | Diagnosis | ICD-10-CM |
| T86.811 | Lung transplant failure | Diagnosis | ICD-10-CM |
| T86.812 | Lung transplant infection | Diagnosis | ICD-10-CM |
| T86.818 | Other complications of lung transplant | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| T86.819 | Unspecified complication of lung transplant | Diagnosis | ICD-10-CM |
| T86.830 | Bone graft rejection | Diagnosis | ICD-10-CM |
| T86.831 | Bone graft failure | Diagnosis | ICD-10-CM |
| T86.832 | Bone graft infection | Diagnosis | ICD-10-CM |
| T86.838 | Other complications of bone graft | Diagnosis | ICD-10-CM |
| T86.839 | Unspecified complication of bone graft | Diagnosis | ICD-10-CM |
| T86.850 | Intestine transplant rejection | Diagnosis | ICD-10-CM |
| T86.851 | Intestine transplant failure | Diagnosis | ICD-10-CM |
| T86.852 | Intestine transplant infection | Diagnosis | ICD-10-CM |
| T86.858 | Other complications of intestine transplant | Diagnosis | ICD-10-CM |
| T86.859 | Unspecified complication of intestine transplant | Diagnosis | ICD-10-CM |
| T86.890 | Other transplanted tissue rejection | Diagnosis | ICD-10-CM |
| T86.891 | Other transplanted tissue failure | Diagnosis | ICD-10-CM |
| T86.892 | Other transplanted tissue infection | Diagnosis | ICD-10-CM |
| T86.898 | Other complications of other transplanted tissue | Diagnosis | ICD-10-CM |
| T86.899 | Unspecified complication of other transplanted tissue | Diagnosis | ICD-10-CM |
| T86.90 | Unspecified complication of unspecified transplanted organ and tissue | Diagnosis | ICD-10-CM |
| T86.91 | Unspecified transplanted organ and tissue rejection | Diagnosis | ICD-10-CM |
| T86.92 | Unspecified transplanted organ and tissue failure | Diagnosis | ICD-10-CM |
| T86.93 | Unspecified transplanted organ and tissue infection | Diagnosis | ICD-10-CM |
| T86.99 | Other complications of unspecified transplanted organ and tissue | Diagnosis | ICD-10-CM |
| XW03351 | Introduction of Blinatumomab Antineoplastic Immunotherapy into Peripheral Vein, Percutaneous Approach, New Technology Group 1 | Procedure | ICD-10-PCS |
| XW033B3 | Introduction of Cytarabine and Daunorubicin Liposome Antineoplastic into Peripheral Vein, Percutaneous Approach, New Technology Group 3 | Procedure | ICD-10-PCS |
| XW033C3 | Introduction of Engineered Autologous Chimeric Antigen Receptor T-cell Immunotherapy into Peripheral Vein, Percutaneous Approach, New Technology Group | Procedure | ICD-10-PCS |
| XW033Q5 | Introduction of Tagraxofusp-erzs Antineoplastic into Peripheral Vein, Percutaneous Approach, New Technology Group 5 | Procedure | ICD-10-PCS |
| XW033S5 | Introduction of Iobenguane I-131 Antineoplastic into Peripheral Vein, Percutaneous Approach, New Technology Group 5 | Procedure | ICD-10-PCS |
| XW04351 | Introduction of Blinatumomab Antineoplastic Immunotherapy into Central Vein, Percutaneous Approach, New Technology Group 1 | Procedure | ICD-10-PCS |
| XW043B3 | Introduction of Cytarabine and Daunorubicin Liposome Antineoplastic into Central Vein, Percutaneous Approach, New Technology Group 3 | Procedure | ICD-10-PCS |
| XW043C3 | Introduction of Engineered Autologous Chimeric Antigen Receptor T-cell Immunotherapy into Central Vein, Percutaneous Approach, New Technology Group 3 | Procedure | ICD-10-PCS |
| XW043Q5 | Introduction of Tagraxofusp-erzs Antineoplastic into Central Vein, Percutaneous Approach, New Technology Group 5 | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| XW043S5 | Introduction of Iobenguane I-131 Antineoplastic into Central Vein, Percutaneous Approach, New Technology Group 5 | Procedure | ICD-10-PCS |
| XW0DXL5 | Introduction of Erdafitinib Antineoplastic into Mouth and Pharynx, External Approach, New Technology Group 5 | Procedure | ICD-10-PCS |
| XW0DXR5 | Introduction of Venetoclax Antineoplastic into Mouth and Pharynx, External Approach, New Technology Group 5 | Procedure | ICD-10-PCS |
| XW0DXT5 | Introduction of Ruxolitinib into Mouth and Pharynx, External Approach, New Technology Group 5 | Procedure | ICD-10-PCS |
| XW0DXV5 | Introduction of Gilteritinib Antineoplastic into Mouth and Pharynx, External Approach, New Technology Group 5 | Procedure | ICD-10-PCS |
| Y83.0 | Surgical operation with transplant of whole organ as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure | Diagnosis | ICD-10-CM |
| Z21 | Asymptomatic human immunodeficiency virus [HIV] infection status | Diagnosis | ICD-10-CM |
| Z48.21 | Encounter for aftercare following heart transplant | Diagnosis | ICD-10-CM |
| Z48.22 | Encounter for aftercare following kidney transplant | Diagnosis | ICD-10-CM |
| Z48.23 | Encounter for aftercare following liver transplant | Diagnosis | ICD-10-CM |
| Z48.24 | Encounter for aftercare following lung transplant | Diagnosis | ICD-10-CM |
| Z48.280 | Encounter for aftercare following heart-lung transplant | Diagnosis | ICD-10-CM |
| Z48.288 | Encounter for aftercare following multiple organ transplant | Diagnosis | ICD-10-CM |
| Z48.290 | Encounter for aftercare following bone marrow transplant | Diagnosis | ICD-10-CM |
| Z48.298 | Encounter for aftercare following other organ transplant | Diagnosis | ICD-10-CM |
| Z49 | Encounter for care involving renal dialysis | Diagnosis | ICD-10-CM |
| Z49.01 | Encounter for fitting and adjustment of extracorporeal dialysis catheter | Diagnosis | ICD-10-CM |
| Z49.02 | Encounter for fitting and adjustment of peritoneal dialysis catheter | Diagnosis | ICD-10-CM |
| Z49.31 | Encounter for adequacy testing for hemodialysis | Diagnosis | ICD-10-CM |
| Z49.32 | Encounter for adequacy testing for peritoneal dialysis | Diagnosis | ICD-10-CM |
| Z51.1 | Encounter for antineoplastic chemotherapy and immunotherapy | Diagnosis | ICD-10-CM |
| Z51.11 | Encounter for antineoplastic chemotherapy | Diagnosis | ICD-10-CM |
| Z51.12 | Encounter for antineoplastic immunotherapy | Diagnosis | ICD-10-CM |
| Z79.51 | Long term (current) use of inhaled steroids | Diagnosis | ICD-10-CM |
| Z79.52 | Long term (current) use of systemic steroids | Diagnosis | ICD-10-CM |
| Z92.240 | Personal history of inhaled steroid therapy | Diagnosis | ICD-10-CM |
| Z92.241 | Personal history of systemic steroid therapy | Diagnosis | ICD-10-CM |
| Z94.0 | Kidney transplant status | Diagnosis | ICD-10-CM |
| Z94.1 | Heart transplant status | Diagnosis | ICD-10-CM |
| Z94.2 | Lung transplant status | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------------------------------|--|---------------|-----------|
| Z94.3 | Heart and lungs transplant status | Diagnosis | ICD-10-CM |
| Z94.4 | Liver transplant status | Diagnosis | ICD-10-CM |
| Z94.5 | Skin transplant status | Diagnosis | ICD-10-CM |
| Z94.6 | Bone transplant status | Diagnosis | ICD-10-CM |
| Z94.7 | Corneal transplant status | Diagnosis | ICD-10-CM |
| Z94.81 | Bone marrow transplant status | Diagnosis | ICD-10-CM |
| Z94.82 | Intestine transplant status | Diagnosis | ICD-10-CM |
| Z94.83 | Pancreas transplant status | Diagnosis | ICD-10-CM |
| Z94.84 | Stem cells transplant status | Diagnosis | ICD-10-CM |
| Z94.89 | Other transplanted organ and tissue status | Diagnosis | ICD-10-CM |
| Z94.9 | Transplanted organ and tissue status, unspecified | Diagnosis | ICD-10-CM |
| Z95.5 | Presence of coronary angioplasty implant and graft | Diagnosis | ICD-10-CM |
| Z99.2 | Dependence on renal dialysis | Diagnosis | ICD-10-CM |
| Interstitial lung disease | | | |
| J84 | OTHER INTERSTITIAL PULMONARY DISEASES | Diagnosis | ICD-10-CM |
| J84.0 | ALVEOLAR AND PARIETO-ALVEOLAR CONDITIONS | Diagnosis | ICD-10-CM |
| J84.01 | ALVEOLAR PROTEINOSIS | Diagnosis | ICD-10-CM |
| J84.02 | PULMONARY ALVEOLAR MICROLITHIASIS | Diagnosis | ICD-10-CM |
| J84.03 | IDIOPATHIC PULMONARY HEMOSIDEROSIS | Diagnosis | ICD-10-CM |
| J84.09 | OTHER ALVEOLAR AND PARIETO-ALVEOLAR CONDITIONS | Diagnosis | ICD-10-CM |
| J84.1 | OTH INTERSTITIAL PULMONARY DISEASES W/FIBROSIS | Diagnosis | ICD-10-CM |
| J84.10 | PULMONARY FIBROSIS UNSPECIFIED | Diagnosis | ICD-10-CM |
| J84.11 | IDIOPATHIC INTERSTITIAL PNEUMONIA | Diagnosis | ICD-10-CM |
| J84.111 | IDIOPATHIC INTERSTITIAL PNEUMONIA NOS | Diagnosis | ICD-10-CM |
| J84.112 | IDIOPATHIC PULMONARY FIBROSIS | Diagnosis | ICD-10-CM |
| J84.113 | IDIOPATHIC NON-SPECIFIC INTERSTITIAL PNEUMONITIS | Diagnosis | ICD-10-CM |
| J84.114 | ACUTE INTERSTITIAL PNEUMONITIS | Diagnosis | ICD-10-CM |
| J84.115 | RESPIRATORY BRONCHIOLITIS INTERST LUNG DISEASE | Diagnosis | ICD-10-CM |
| J84.116 | CRYPTOGENIC ORGANIZING PNEUMONIA | Diagnosis | ICD-10-CM |
| J84.117 | DESQUAMATIVE INTERSTITIAL PNEUMONIA | Diagnosis | ICD-10-CM |
| J84.17 | OTHER INTERST PULM DZ W/FIBROSIS DZ CLASS ELSW | Diagnosis | ICD-10-CM |
| J84.170 | INTRSTIT LNG DIS W PRGR FIBRT PHNTYP DIS CLASS E | Diagnosis | ICD-10-CM |
| J84.178 | OTH INTERSTIT PULMON DIS FIBROSIS DIS CLASS ELSW | Diagnosis | ICD-10-CM |
| J84.2 | LYMPHOID INTERSTITIAL PNEUMONIA | Diagnosis | ICD-10-CM |
| J84.8 | OTHER SPECIFIED INTERSTITIAL PULMONARY DISEASES | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------------------------------|--|---------------|-----------|
| J84.81 | LYMPHANGIOLEIOMYOMATOSIS | Diagnosis | ICD-10-CM |
| J84.82 | ADULT PULMONARY LANGERHANS CELL HISTIOCYTOSIS | Diagnosis | ICD-10-CM |
| J84.83 | SURFACTANT MUTATIONS OF THE LUNG | Diagnosis | ICD-10-CM |
| J84.84 | OTHER INTERSTITIAL LUNG DISEASES OF CHILDHOOD | Diagnosis | ICD-10-CM |
| J84.841 | NEUROENDOCRINE CELL HYPERPLASIA OF INFANCY | Diagnosis | ICD-10-CM |
| J84.842 | PULMONARY INTERSTITIAL GLYCOGENOSIS | Diagnosis | ICD-10-CM |
| J84.843 | ALVEOL CAPILLARY DYSPLASIA W/VEIN MISALIGNMENT | Diagnosis | ICD-10-CM |
| J84.848 | OTHER INTERSTITIAL LUNG DISEASES OF CHILDHOOD | Diagnosis | ICD-10-CM |
| J84.89 | OTHER SPECIFIED INTERSTITIAL PULMONARY DISEASES | Diagnosis | ICD-10-CM |
| J84.9 | INTERSTITIAL PULMONARY DISEASE UNSPECIFIED | Diagnosis | ICD-10-CM |
| Mental Health Conditions | | | |
| F20 | Schizophrenia | Diagnosis | ICD-10-CM |
| F20.0 | Paranoid schizophrenia | Diagnosis | ICD-10-CM |
| F20.1 | Disorganized schizophrenia | Diagnosis | ICD-10-CM |
| F20.2 | Catatonic schizophrenia | Diagnosis | ICD-10-CM |
| F20.3 | Undifferentiated schizophrenia | Diagnosis | ICD-10-CM |
| F20.5 | Residual schizophrenia | Diagnosis | ICD-10-CM |
| F20.8 | Other schizophrenia | Diagnosis | ICD-10-CM |
| F20.81 | Schizophreniform disorder | Diagnosis | ICD-10-CM |
| F20.89 | Other schizophrenia | Diagnosis | ICD-10-CM |
| F20.9 | Schizophrenia, unspecified | Diagnosis | ICD-10-CM |
| F21 | Schizotypal disorder | Diagnosis | ICD-10-CM |
| F22 | Delusional disorders | Diagnosis | ICD-10-CM |
| F23 | Brief psychotic disorder | Diagnosis | ICD-10-CM |
| F24 | Shared psychotic disorder | Diagnosis | ICD-10-CM |
| F25 | Schizoaffective disorders | Diagnosis | ICD-10-CM |
| F25.0 | Schizoaffective disorder, bipolar type | Diagnosis | ICD-10-CM |
| F25.1 | Schizoaffective disorder, depressive type | Diagnosis | ICD-10-CM |
| F25.8 | Other schizoaffective disorders | Diagnosis | ICD-10-CM |
| F25.9 | Schizoaffective disorder, unspecified | Diagnosis | ICD-10-CM |
| F28 | Other psychotic disorder not due to a substance or known physiological condition | Diagnosis | ICD-10-CM |
| F29 | Unspecified psychosis not due to a substance or known physiological condition | Diagnosis | ICD-10-CM |
| F30 | Manic episode | Diagnosis | ICD-10-CM |
| F30.1 | Manic episode without psychotic symptoms | Diagnosis | ICD-10-CM |
| F30.10 | Manic episode without psychotic symptoms, unspecified | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| F30.11 | Manic episode without psychotic symptoms, mild | Diagnosis | ICD-10-CM |
| F30.12 | Manic episode without psychotic symptoms, moderate | Diagnosis | ICD-10-CM |
| F30.13 | Manic episode, severe, without psychotic symptoms | Diagnosis | ICD-10-CM |
| F30.2 | Manic episode, severe with psychotic symptoms | Diagnosis | ICD-10-CM |
| F30.3 | Manic episode in partial remission | Diagnosis | ICD-10-CM |
| F30.4 | Manic episode in full remission | Diagnosis | ICD-10-CM |
| F30.8 | Other manic episodes | Diagnosis | ICD-10-CM |
| F30.9 | Manic episode, unspecified | Diagnosis | ICD-10-CM |
| F31 | Bipolar disorder | Diagnosis | ICD-10-CM |
| F31.0 | Bipolar disorder, current episode hypomanic | Diagnosis | ICD-10-CM |
| F31.1 | Bipolar disorder, current episode manic without psychotic features | Diagnosis | ICD-10-CM |
| F31.10 | Bipolar disorder, current episode manic without psychotic features, unspecified | Diagnosis | ICD-10-CM |
| F31.11 | Bipolar disorder, current episode manic without psychotic features, mild | Diagnosis | ICD-10-CM |
| F31.12 | Bipolar disorder, current episode manic without psychotic features, moderate | Diagnosis | ICD-10-CM |
| F31.13 | Bipolar disorder, current episode manic without psychotic features, severe | Diagnosis | ICD-10-CM |
| F31.2 | Bipolar disorder, current episode manic severe with psychotic features | Diagnosis | ICD-10-CM |
| F31.3 | Bipolar disorder, current episode depressed, mild or moderate severity | Diagnosis | ICD-10-CM |
| F31.30 | Bipolar disorder, current episode depressed, mild or moderate severity, unspecified | Diagnosis | ICD-10-CM |
| F31.31 | Bipolar disorder, current episode depressed, mild | Diagnosis | ICD-10-CM |
| F31.32 | Bipolar disorder, current episode depressed, moderate | Diagnosis | ICD-10-CM |
| F31.4 | Bipolar disorder, current episode depressed, severe, without psychotic features | Diagnosis | ICD-10-CM |
| F31.5 | Bipolar disorder, current episode depressed, severe, with psychotic features | Diagnosis | ICD-10-CM |
| F31.6 | Bipolar disorder, current episode mixed | Diagnosis | ICD-10-CM |
| F31.60 | Bipolar disorder, current episode mixed, unspecified | Diagnosis | ICD-10-CM |
| F31.61 | Bipolar disorder, current episode mixed, mild | Diagnosis | ICD-10-CM |
| F31.62 | Bipolar disorder, current episode mixed, moderate | Diagnosis | ICD-10-CM |
| F31.63 | Bipolar disorder, current episode mixed, severe, without psychotic features | Diagnosis | ICD-10-CM |
| F31.64 | Bipolar disorder, current episode mixed, severe, with psychotic features | Diagnosis | ICD-10-CM |
| F31.7 | Bipolar disorder, currently in remission | Diagnosis | ICD-10-CM |
| F31.70 | Bipolar disorder, currently in remission, most recent episode unspecified | Diagnosis | ICD-10-CM |
| F31.71 | Bipolar disorder, in partial remission, most recent episode hypomanic | Diagnosis | ICD-10-CM |
| F31.72 | Bipolar disorder, in full remission, most recent episode hypomanic | Diagnosis | ICD-10-CM |
| F31.73 | Bipolar disorder, in partial remission, most recent episode manic | Diagnosis | ICD-10-CM |
| F31.74 | Bipolar disorder, in full remission, most recent episode manic | Diagnosis | ICD-10-CM |
| F31.75 | Bipolar disorder, in partial remission, most recent episode depressed | Diagnosis | ICD-10-CM |
| F31.76 | Bipolar disorder, in full remission, most recent episode depressed | Diagnosis | ICD-10-CM |
| F31.77 | Bipolar disorder, in partial remission, most recent episode mixed | Diagnosis | ICD-10-CM |
| F31.78 | Bipolar disorder, in full remission, most recent episode mixed | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| F31.8 | Other bipolar disorders | Diagnosis | ICD-10-CM |
| F31.81 | Bipolar II disorder | Diagnosis | ICD-10-CM |
| F31.89 | Other bipolar disorder | Diagnosis | ICD-10-CM |
| F31.9 | Bipolar disorder, unspecified | Diagnosis | ICD-10-CM |
| F32 | Depressive episode | Diagnosis | ICD-10-CM |
| F32.0 | Major depressive disorder, single episode, mild | Diagnosis | ICD-10-CM |
| F32.1 | Major depressive disorder, single episode, moderate | Diagnosis | ICD-10-CM |
| F32.2 | Major depressive disorder, single episode, severe without psychotic features | Diagnosis | ICD-10-CM |
| F32.3 | Major depressive disorder, single episode, severe with psychotic features | Diagnosis | ICD-10-CM |
| F32.4 | Major depressive disorder, single episode, in partial remission | Diagnosis | ICD-10-CM |
| F32.5 | Major depressive disorder, single episode, in full remission | Diagnosis | ICD-10-CM |
| F32.8 | Other depressive episodes | Diagnosis | ICD-10-CM |
| F32.81 | Premenstrual dysphoric disorder | Diagnosis | ICD-10-CM |
| F32.89 | Other specified depressive episodes | Diagnosis | ICD-10-CM |
| F32.9 | Major depressive disorder, single episode, unspecified | Diagnosis | ICD-10-CM |
| F32.A | Depression, unspecified | Diagnosis | ICD-10-CM |
| F33 | Major depressive disorder, recurrent | Diagnosis | ICD-10-CM |
| F33.0 | Major depressive disorder, recurrent, mild | Diagnosis | ICD-10-CM |
| F33.1 | Major depressive disorder, recurrent, moderate | Diagnosis | ICD-10-CM |
| F33.2 | Major depressive disorder, recurrent severe without psychotic features | Diagnosis | ICD-10-CM |
| F33.3 | Major depressive disorder, recurrent, severe with psychotic symptoms | Diagnosis | ICD-10-CM |
| F33.4 | Major depressive disorder, recurrent, in remission | Diagnosis | ICD-10-CM |
| F33.40 | Major depressive disorder, recurrent, in remission, unspecified | Diagnosis | ICD-10-CM |
| F33.41 | Major depressive disorder, recurrent, in partial remission | Diagnosis | ICD-10-CM |
| F33.42 | Major depressive disorder, recurrent, in full remission | Diagnosis | ICD-10-CM |
| F33.8 | Other recurrent depressive disorders | Diagnosis | ICD-10-CM |
| F33.9 | Major depressive disorder, recurrent, unspecified | Diagnosis | ICD-10-CM |
| F34 | Persistent mood [affective] disorders | Diagnosis | ICD-10-CM |
| F34.0 | Cyclothymic disorder | Diagnosis | ICD-10-CM |
| F34.1 | Dysthymic disorder | Diagnosis | ICD-10-CM |
| F34.8 | Other persistent mood [affective] disorders | Diagnosis | ICD-10-CM |
| F34.81 | Disruptive mood dysregulation disorder | Diagnosis | ICD-10-CM |
| F34.89 | Other specified persistent mood disorders | Diagnosis | ICD-10-CM |
| F34.9 | Persistent mood [affective] disorder, unspecified | Diagnosis | ICD-10-CM |
| F39 | Unspecified mood [affective] disorder | Diagnosis | ICD-10-CM |

Obesity

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| OD16079 | Bypass Stomach to Duodenum with Autologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| OD1607A | Bypass Stomach to Jejunum with Autologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| OD1607B | Bypass Stomach to Ileum with Autologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| OD1607L | Bypass Stomach to Transverse Colon with Autologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| OD160J9 | Bypass Stomach to Duodenum with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| OD160JA | Bypass Stomach to Jejunum with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| OD160JB | Bypass Stomach to Ileum with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| OD160JL | Bypass Stomach to Transverse Colon with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| OD160K9 | Bypass Stomach to Duodenum with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| OD160KA | Bypass Stomach to Jejunum with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| OD160KB | Bypass Stomach to Ileum with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| OD160KL | Bypass Stomach to Transverse Colon with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| OD160Z9 | Bypass Stomach to Duodenum, Open Approach | Procedure | ICD-10-PCS |
| OD160ZA | Bypass Stomach to Jejunum, Open Approach | Procedure | ICD-10-PCS |
| OD160ZB | Bypass Stomach to Ileum, Open Approach | Procedure | ICD-10-PCS |
| OD160ZL | Bypass Stomach to Transverse Colon, Open Approach | Procedure | ICD-10-PCS |
| OD16479 | Bypass Stomach to Duodenum with Autologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| OD1647A | Bypass Stomach to Jejunum with Autologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| OD1647B | Bypass Stomach to Ileum with Autologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| OD1647L | Bypass Stomach to Transverse Colon with Autologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| OD164J9 | Bypass Stomach to Duodenum with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| OD164JA | Bypass Stomach to Jejunum with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| OD164JB | Bypass Stomach to Ileum with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| OD164JL | Bypass Stomach to Transverse Colon with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| OD164K9 | Bypass Stomach to Duodenum with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| 0D164KA | Bypass Stomach to Jejunum with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D164KB | Bypass Stomach to Ileum with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D164KL | Bypass Stomach to Transverse Colon with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D164Z9 | Bypass Stomach to Duodenum, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D164ZA | Bypass Stomach to Jejunum, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D164ZB | Bypass Stomach to Ileum, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D164ZL | Bypass Stomach to Transverse Colon, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D16879 | Bypass Stomach to Duodenum with Autologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D1687A | Bypass Stomach to Jejunum with Autologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D1687B | Bypass Stomach to Ileum with Autologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D1687L | Bypass Stomach to Transverse Colon with Autologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D168J9 | Bypass Stomach to Duodenum with Synthetic Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D168JA | Bypass Stomach to Jejunum with Synthetic Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D168JB | Bypass Stomach to Ileum with Synthetic Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D168JL | Bypass Stomach to Transverse Colon with Synthetic Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D168K9 | Bypass Stomach to Duodenum with Nonautologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D168KA | Bypass Stomach to Jejunum with Nonautologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D168KB | Bypass Stomach to Ileum with Nonautologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D168KL | Bypass Stomach to Transverse Colon with Nonautologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D168Z9 | Bypass Stomach to Duodenum, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D168ZA | Bypass Stomach to Jejunum, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D168ZB | Bypass Stomach to Ileum, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| 0D168ZL | Bypass Stomach to Transverse Colon, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D19079 | Bypass Duodenum to Duodenum with Autologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 0D1907A | Bypass Duodenum to Jejunum with Autologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 0D1907B | Bypass Duodenum to Ileum with Autologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 0D190J9 | Bypass Duodenum to Duodenum with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 0D190JA | Bypass Duodenum to Jejunum with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 0D190JB | Bypass Duodenum to Ileum with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 0D190K9 | Bypass Duodenum to Duodenum with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 0D190KA | Bypass Duodenum to Jejunum with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 0D190KB | Bypass Duodenum to Ileum with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 0D190Z9 | Bypass Duodenum to Duodenum, Open Approach | Procedure | ICD-10-PCS |
| 0D190ZA | Bypass Duodenum to Jejunum, Open Approach | Procedure | ICD-10-PCS |
| 0D190ZB | Bypass Duodenum to Ileum, Open Approach | Procedure | ICD-10-PCS |
| 0D19479 | Bypass Duodenum to Duodenum with Autologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D1947A | Bypass Duodenum to Jejunum with Autologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D1947B | Bypass Duodenum to Ileum with Autologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D194J9 | Bypass Duodenum to Duodenum with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D194JA | Bypass Duodenum to Jejunum with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D194JB | Bypass Duodenum to Ileum with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D194K9 | Bypass Duodenum to Duodenum with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D194KA | Bypass Duodenum to Jejunum with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D194KB | Bypass Duodenum to Ileum with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D194Z9 | Bypass Duodenum to Duodenum, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D194ZA | Bypass Duodenum to Jejunum, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D194ZB | Bypass Duodenum to Ileum, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| 0D19879 | Bypass Duodenum to Duodenum with Autologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D1987A | Bypass Duodenum to Jejunum with Autologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D1987B | Bypass Duodenum to Ileum with Autologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D198J9 | Bypass Duodenum to Duodenum with Synthetic Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D198JA | Bypass Duodenum to Jejunum with Synthetic Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D198JB | Bypass Duodenum to Ileum with Synthetic Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D198K9 | Bypass Duodenum to Duodenum with Nonautologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D198KA | Bypass Duodenum to Jejunum with Nonautologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D198KB | Bypass Duodenum to Ileum with Nonautologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D198Z9 | Bypass Duodenum to Duodenum, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D198ZA | Bypass Duodenum to Jejunum, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D198ZB | Bypass Duodenum to Ileum, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D1A07A | Bypass Jejunum to Jejunum with Autologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 0D1A07B | Bypass Jejunum to Ileum with Autologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 0D1A0JA | Bypass Jejunum to Jejunum with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 0D1A0JB | Bypass Jejunum to Ileum with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 0D1A0KA | Bypass Jejunum to Jejunum with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 0D1A0KB | Bypass Jejunum to Ileum with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 0D1A0ZA | Bypass Jejunum to Jejunum, Open Approach | Procedure | ICD-10-PCS |
| 0D1A0ZB | Bypass Jejunum to Ileum, Open Approach | Procedure | ICD-10-PCS |
| 0D1A47A | Bypass Jejunum to Jejunum with Autologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D1A47B | Bypass Jejunum to Ileum with Autologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D1A4JA | Bypass Jejunum to Jejunum with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| 0D1A4JB | Bypass Jejunum to Ileum with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D1A4KA | Bypass Jejunum to Jejunum with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D1A4KB | Bypass Jejunum to Ileum with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D1A4ZA | Bypass Jejunum to Jejunum, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D1A4ZB | Bypass Jejunum to Ileum, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D1A87A | Bypass Jejunum to Jejunum with Autologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D1A87B | Bypass Jejunum to Ileum with Autologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D1A8JA | Bypass Jejunum to Jejunum with Synthetic Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D1A8JB | Bypass Jejunum to Ileum with Synthetic Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D1A8KA | Bypass Jejunum to Jejunum with Nonautologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D1A8KB | Bypass Jejunum to Ileum with Nonautologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D1A8ZA | Bypass Jejunum to Jejunum, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D1A8ZB | Bypass Jejunum to Ileum, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D1B07B | Bypass Ileum to Ileum with Autologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 0D1B0JB | Bypass Ileum to Ileum with Synthetic Substitute, Open Approach | Procedure | ICD-10-PCS |
| 0D1B0KB | Bypass Ileum to Ileum with Nonautologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 0D1B0ZB | Bypass Ileum to Ileum, Open Approach | Procedure | ICD-10-PCS |
| 0D1B47B | Bypass Ileum to Ileum with Autologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D1B4JB | Bypass Ileum to Ileum with Synthetic Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D1B4KB | Bypass Ileum to Ileum with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D1B4ZB | Bypass Ileum to Ileum, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0D1B87B | Bypass Ileum to Ileum with Autologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| 0D1B8JB | Bypass Ileum to Ileum with Synthetic Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D1B8KB | Bypass Ileum to Ileum with Nonautologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D1B8ZB | Bypass Ileum to Ileum, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0D1B8ZH | Bypass Ileum to Cecum, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 0DB60Z3 | Excision of Stomach, Open Approach, Vertical | Procedure | ICD-10-PCS |
| 0DB60ZZ | Excision of Stomach, Open Approach | Procedure | ICD-10-PCS |
| 0DB63Z3 | Excision of Stomach, Percutaneous Approach, Vertical | Procedure | ICD-10-PCS |
| 0DB63ZZ | Excision of Stomach, Percutaneous Approach | Procedure | ICD-10-PCS |
| 0DB67Z3 | Excision of Stomach, Via Natural or Artificial Opening, Vertical | Procedure | ICD-10-PCS |
| 0DB67ZZ | Excision of Stomach, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 0DB68Z3 | Excision of Stomach, Via Natural or Artificial Opening Endoscopic, Vertical | Procedure | ICD-10-PCS |
| 0DB80ZZ | Excision of Small Intestine, Open Approach | Procedure | ICD-10-PCS |
| 0DBB0ZZ | Excision of Ileum, Open Approach | Procedure | ICD-10-PCS |
| 0DV64CZ | Restriction of Stomach with Extraluminal Device, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 0F190Z3 | Bypass Common Bile Duct to Duodenum, Open Approach | Procedure | ICD-10-PCS |
| 0TRB07Z | Replacement of Bladder with Autologous Tissue Substitute, Open Approach | Procedure | ICD-10-PCS |
| 43644 | Laparoscopy, surgical, gastric restrictive procedure; with gastric bypass and Roux-en-Y gastroenterostomy (roux limb 150 cm or less) | Procedure | CPT-4 |
| 43645 | Laparoscopy, surgical, gastric restrictive procedure; with gastric bypass and small intestine reconstruction to limit absorption | Procedure | CPT-4 |
| 43770 | Laparoscopy, surgical, gastric restrictive procedure; placement of adjustable gastric restrictive device (eg, gastric band and subcutaneous port components) | Procedure | CPT-4 |
| 43842 | Gastric restrictive procedure, without gastric bypass, for morbid obesity; vertical-banded gastroplasty | Procedure | CPT-4 |
| 43843 | Gastric restrictive procedure, without gastric bypass, for morbid obesity; other than vertical-banded gastroplasty | Procedure | CPT-4 |
| 43845 | Gastric restrictive procedure with partial gastrectomy, pylorus-preserving duodenoileostomy and ileoileostomy (50 to 100 cm common channel) to limit absorption (biliopancreatic diversion with duodenal switch) | Procedure | CPT-4 |
| 43846 | Gastric restrictive procedure, with gastric bypass for morbid obesity; with short limb (150 cm or less) Roux-en-Y gastroenterostomy | Procedure | CPT-4 |
| 43847 | Gastric restrictive procedure, with gastric bypass for morbid obesity; with small intestine reconstruction to limit absorption | Procedure | CPT-4 |
| E66.01 | Morbid (severe) obesity due to excess calories | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| E66.09 | Other obesity due to excess calories | Diagnosis | ICD-10-CM |
| E66.1 | Drug-induced obesity | Diagnosis | ICD-10-CM |
| E66.2 | Morbid (severe) obesity with alveolar hypoventilation | Diagnosis | ICD-10-CM |
| E66.8 | Other obesity | Diagnosis | ICD-10-CM |
| E66.9 | Obesity, unspecified | Diagnosis | ICD-10-CM |
| K95.01 | Infection due to gastric band procedure | Diagnosis | ICD-10-CM |
| K95.09 | Other complications of gastric band procedure | Diagnosis | ICD-10-CM |
| K95.81 | Infection due to other bariatric procedure | Diagnosis | ICD-10-CM |
| K95.89 | Other complications of other bariatric procedure | Diagnosis | ICD-10-CM |
| O99.210 | Obesity complicating pregnancy, unspecified trimester | Diagnosis | ICD-10-CM |
| O99.211 | Obesity complicating pregnancy, first trimester | Diagnosis | ICD-10-CM |
| O99.212 | Obesity complicating pregnancy, second trimester | Diagnosis | ICD-10-CM |
| O99.213 | Obesity complicating pregnancy, third trimester | Diagnosis | ICD-10-CM |
| O99.214 | Obesity complicating childbirth | Diagnosis | ICD-10-CM |
| O99.215 | Obesity complicating the puerperium | Diagnosis | ICD-10-CM |
| O99.840 | Bariatric surgery status complicating pregnancy, unspecified trimester | Diagnosis | ICD-10-CM |
| O99.841 | Bariatric surgery status complicating pregnancy, first trimester | Diagnosis | ICD-10-CM |
| O99.842 | Bariatric surgery status complicating pregnancy, second trimester | Diagnosis | ICD-10-CM |
| O99.843 | Bariatric surgery status complicating pregnancy, third trimester | Diagnosis | ICD-10-CM |
| O99.844 | Bariatric surgery status complicating childbirth | Diagnosis | ICD-10-CM |
| O99.845 | Bariatric surgery status complicating the puerperium | Diagnosis | ICD-10-CM |
| Z68.25 | Body mass index (BMI) 25.0-25.9, adult | Diagnosis | ICD-10-CM |
| Z68.26 | Body mass index (BMI) 26.0-26.9, adult | Diagnosis | ICD-10-CM |
| Z68.27 | Body mass index (BMI) 27.0-27.9, adult | Diagnosis | ICD-10-CM |
| Z68.28 | Body mass index (BMI) 28.0-28.9, adult | Diagnosis | ICD-10-CM |
| Z68.29 | Body mass index (BMI) 29.0-29.9, adult | Diagnosis | ICD-10-CM |
| Z68.30 | Body mass index [BMI] 30.0-30.9, adult | Diagnosis | ICD-10-CM |
| Z68.31 | Body mass index [BMI] 31.0-31.9, adult | Diagnosis | ICD-10-CM |
| Z68.32 | Body mass index [BMI] 32.0-32.9, adult | Diagnosis | ICD-10-CM |
| Z68.33 | Body mass index [BMI] 33.0-33.9, adult | Diagnosis | ICD-10-CM |
| Z68.34 | Body mass index [BMI] 34.0-34.9, adult | Diagnosis | ICD-10-CM |
| Z68.35 | Body mass index [BMI] 35.0-35.9, adult | Diagnosis | ICD-10-CM |
| Z68.36 | Body mass index [BMI] 36.0-36.9, adult | Diagnosis | ICD-10-CM |
| Z68.37 | Body mass index [BMI] 37.0-37.9, adult | Diagnosis | ICD-10-CM |
| Z68.38 | Body mass index [BMI] 38.0-38.9, adult | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------------------|---|---------------|------------|
| Z68.39 | Body mass index [BMI] 39.0-39.9, adult | Diagnosis | ICD-10-CM |
| Z68.41 | Body mass index [BMI]40.0-44.9, adult | Diagnosis | ICD-10-CM |
| Z68.42 | Body mass index [BMI] 45.0-49.9, adult | Diagnosis | ICD-10-CM |
| Z68.43 | Body mass index [BMI] 50.0-59.9, adult | Diagnosis | ICD-10-CM |
| Z68.44 | Body mass index [BMI] 60.0-69.9, adult | Diagnosis | ICD-10-CM |
| Z68.45 | Body mass index [BMI] 70 or greater, adult | Diagnosis | ICD-10-CM |
| Z68.53 | Body mass index (BMI) pediatric, 85th percentile to less than 95th percentile for age | Diagnosis | ICD-10-CM |
| Z68.54 | Body mass index (BMI) pediatric, greater than or equal to 95th percentile for age | Diagnosis | ICD-10-CM |
| Z98.84 | Bariatric surgery status | Diagnosis | ICD-10-CM |
| Overweight | | | |
| E66.3 | Overweight | Diagnosis | ICD-10-CM |
| Z68.25 | Body mass index (BMI) 25.0-25.9, adult | Diagnosis | ICD-10-CM |
| Z68.26 | Body mass index (BMI) 26.0-26.9, adult | Diagnosis | ICD-10-CM |
| Z68.27 | Body mass index (BMI) 27.0-27.9, adult | Diagnosis | ICD-10-CM |
| Z68.28 | Body mass index (BMI) 28.0-28.9, adult | Diagnosis | ICD-10-CM |
| Z68.29 | Body mass index (BMI) 29.0-29.9, adult | Diagnosis | ICD-10-CM |
| Pregnancy | | | |
| 0W8NXZZ | Division of Female Perineum, External Approach | Procedure | ICD-10-PCS |
| 10900ZC | Drainage of Amniotic Fluid, Therapeutic from Products of Conception, Open Approach | Procedure | ICD-10-PCS |
| 10903ZC | Drainage of Amniotic Fluid, Therapeutic from Products of Conception, Percutaneous Approach | Procedure | ICD-10-PCS |
| 10904ZC | Drainage of Amniotic Fluid, Therapeutic from Products of Conception, Percutaneous Endoscopic Approach | Procedure | ICD-10-PCS |
| 10907ZC | Drainage of Amniotic Fluid, Therapeutic from Products of Conception, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 10908ZC | Drainage of Amniotic Fluid, Therapeutic from Products of Conception, Via Natural or Artificial Opening Endoscopic | Procedure | ICD-10-PCS |
| 10D00Z0 | Extraction of Products of Conception, Classical, Open Approach | Procedure | ICD-10-PCS |
| 10D00Z1 | Extraction of Products of Conception, Low Cervical, Open Approach | Procedure | ICD-10-PCS |
| 10D00Z2 | Extraction of Products of Conception, Extraperitoneal, Open Approach | Procedure | ICD-10-PCS |
| 10D07Z3 | Extraction of Products of Conception, Low Forceps, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 10D07Z4 | Extraction of Products of Conception, Mid Forceps, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 10D07Z5 | Extraction of Products of Conception, High Forceps, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 10D07Z6 | Extraction of Products of Conception, Vacuum, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 10D07Z7 | Extraction of Products of Conception, Internal Version, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| 10D07Z8 | Extraction of Products of Conception, Other, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 10E0XZZ | Delivery of Products of Conception, External Approach | Procedure | ICD-10-PCS |
| 10S07ZZ | Reposition Products of Conception, Via Natural or Artificial Opening | Procedure | ICD-10-PCS |
| 59400 | Routine obstetric care including antepartum care, vaginal delivery (with or without episiotomy, and/or forceps) and postpartum care | Procedure | CPT-4 |
| 59409 | Vaginal delivery only (with or without episiotomy and/or forceps); | Procedure | CPT-4 |
| 59410 | Vaginal delivery only (with or without episiotomy and/or forceps); including postpartum care | Procedure | CPT-4 |
| 59510 | Routine obstetric care including antepartum care, cesarean delivery, and postpartum care | Procedure | CPT-4 |
| 59514 | Cesarean delivery only; | Procedure | CPT-4 |
| 59515 | Cesarean delivery only; including postpartum care | Procedure | CPT-4 |
| 59610 | Routine obstetric care including antepartum care, vaginal delivery (with or without episiotomy, and/or forceps) and postpartum care, after previous cesarean delivery | Procedure | CPT-4 |
| 59612 | Vaginal delivery only, after previous cesarean delivery (with or without episiotomy and/or forceps); | Procedure | CPT-4 |
| 59614 | Vaginal delivery only, after previous cesarean delivery (with or without episiotomy and/or forceps); including postpartum care | Procedure | CPT-4 |
| 59618 | Routine obstetric care including antepartum care, cesarean delivery, and postpartum care, following attempted vaginal delivery after previous cesarean delivery | Procedure | CPT-4 |
| 59620 | Cesarean delivery only, following attempted vaginal delivery after previous cesarean delivery; | Procedure | CPT-4 |
| 59622 | Cesarean delivery only, following attempted vaginal delivery after previous cesarean delivery; including postpartum care | Procedure | CPT-4 |
| O10.02 | Pre-existing essential hypertension complicating childbirth | Diagnosis | ICD-10-CM |
| O10.12 | Pre-existing hypertensive heart disease complicating childbirth | Diagnosis | ICD-10-CM |
| O10.22 | Pre-existing hypertensive chronic kidney disease complicating childbirth | Diagnosis | ICD-10-CM |
| O10.32 | Pre-existing hypertensive heart and chronic kidney disease complicating childbirth | Diagnosis | ICD-10-CM |
| O10.42 | Pre-existing secondary hypertension complicating childbirth | Diagnosis | ICD-10-CM |
| O10.92 | Unspecified pre-existing hypertension complicating childbirth | Diagnosis | ICD-10-CM |
| O11.4 | Pre-existing hypertension with pre-eclampsia, complicating childbirth | Diagnosis | ICD-10-CM |
| O12.04 | Gestational edema, complicating childbirth | Diagnosis | ICD-10-CM |
| O12.14 | Gestational proteinuria, complicating childbirth | Diagnosis | ICD-10-CM |
| O12.24 | Gestational edema with proteinuria, complicating childbirth | Diagnosis | ICD-10-CM |
| O13.4 | Gestational [pregnancy-induced] hypertension without significant proteinuria, | Diagnosis | ICD-10-CM |
| O14.04 | Mild to moderate pre-eclampsia, complicating childbirth | Diagnosis | ICD-10-CM |
| O14.14 | Severe pre-eclampsia complicating childbirth | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| O14.24 | HELLP syndrome, complicating childbirth | Diagnosis | ICD-10-CM |
| O14.94 | Unspecified pre-eclampsia, complicating childbirth | Diagnosis | ICD-10-CM |
| O16.4 | Unspecified maternal hypertension, complicating childbirth | Diagnosis | ICD-10-CM |
| O24.02 | Pre-existing type 1 diabetes mellitus, in childbirth | Diagnosis | ICD-10-CM |
| O24.12 | Pre-existing type 2 diabetes mellitus, in childbirth | Diagnosis | ICD-10-CM |
| O24.32 | Unspecified pre-existing diabetes mellitus in childbirth | Diagnosis | ICD-10-CM |
| O24.420 | Gestational diabetes mellitus in childbirth, diet controlled | Diagnosis | ICD-10-CM |
| O24.424 | Gestational diabetes mellitus in childbirth, insulin controlled | Diagnosis | ICD-10-CM |
| O24.425 | Gestational diabetes mellitus in childbirth, controlled by oral hypoglycemic drugs | Diagnosis | ICD-10-CM |
| O24.429 | Gestational diabetes mellitus in childbirth, unspecified control | Diagnosis | ICD-10-CM |
| O24.82 | Other pre-existing diabetes mellitus in childbirth | Diagnosis | ICD-10-CM |
| O24.92 | Unspecified diabetes mellitus in childbirth | Diagnosis | ICD-10-CM |
| O25.2 | Malnutrition in childbirth | Diagnosis | ICD-10-CM |
| O26.62 | Liver and biliary tract disorders in childbirth | Diagnosis | ICD-10-CM |
| O26.72 | Subluxation of symphysis (pubis) in childbirth | Diagnosis | ICD-10-CM |
| O48.0 | Post-term pregnancy | Diagnosis | ICD-10-CM |
| O48.1 | Prolonged pregnancy | Diagnosis | ICD-10-CM |
| O60.12X0 | Preterm labor second trimester with preterm delivery second trimester, not applicable | Diagnosis | ICD-10-CM |
| O60.12X1 | Preterm labor second trimester with preterm delivery second trimester, fetus 1 | Diagnosis | ICD-10-CM |
| O60.12X2 | Preterm labor second trimester with preterm delivery second trimester, fetus 2 | Diagnosis | ICD-10-CM |
| O60.12X3 | Preterm labor second trimester with preterm delivery second trimester, fetus 3 | Diagnosis | ICD-10-CM |
| O60.12X4 | Preterm labor second trimester with preterm delivery second trimester, fetus 4 | Diagnosis | ICD-10-CM |
| O60.12X5 | Preterm labor second trimester with preterm delivery second trimester, fetus 5 | Diagnosis | ICD-10-CM |
| O60.12X9 | Preterm labor second trimester with preterm delivery second trimester, other fetus | Diagnosis | ICD-10-CM |
| O60.13X0 | Preterm labor second trimester with preterm delivery third trimester, not applicable | Diagnosis | ICD-10-CM |
| O60.13X1 | Preterm labor second trimester with preterm delivery third trimester, fetus 1 | Diagnosis | ICD-10-CM |
| O60.13X2 | Preterm labor second trimester with preterm delivery third trimester, fetus 2 | Diagnosis | ICD-10-CM |
| O60.13X3 | Preterm labor second trimester with preterm delivery third trimester, fetus 3 | Diagnosis | ICD-10-CM |
| O60.13X4 | Preterm labor second trimester with preterm delivery third trimester, fetus 4 | Diagnosis | ICD-10-CM |
| O60.13X5 | Preterm labor second trimester with preterm delivery third trimester, fetus 5 | Diagnosis | ICD-10-CM |
| O60.13X9 | Preterm labor second trimester with preterm delivery third trimester, other fetus | Diagnosis | ICD-10-CM |
| O60.14X0 | Preterm labor third trimester with preterm delivery third trimester, not applicable or | Diagnosis | ICD-10-CM |
| O60.14X1 | Preterm labor third trimester with preterm delivery third trimester, fetus 1 | Diagnosis | ICD-10-CM |
| O60.14X2 | Preterm labor third trimester with preterm delivery third trimester, fetus 2 | Diagnosis | ICD-10-CM |
| O60.14X3 | Preterm labor third trimester with preterm delivery third trimester, fetus 3 | Diagnosis | ICD-10-CM |
| O60.14X4 | Preterm labor third trimester with preterm delivery third trimester, fetus 4 | Diagnosis | ICD-10-CM |
| O60.14X5 | Preterm labor third trimester with preterm delivery third trimester, fetus 5 | Diagnosis | ICD-10-CM |
| O60.14X9 | Preterm labor third trimester with preterm delivery third trimester, other fetus | Diagnosis | ICD-10-CM |
| O60.22X0 | Term delivery with preterm labor, second trimester, not applicable or unspecified | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| O60.22X1 | Term delivery with preterm labor, second trimester, fetus 1 | Diagnosis | ICD-10-CM |
| O60.22X2 | Term delivery with preterm labor, second trimester, fetus 2 | Diagnosis | ICD-10-CM |
| O60.22X3 | Term delivery with preterm labor, second trimester, fetus 3 | Diagnosis | ICD-10-CM |
| O60.22X4 | Term delivery with preterm labor, second trimester, fetus 4 | Diagnosis | ICD-10-CM |
| O60.22X5 | Term delivery with preterm labor, second trimester, fetus 5 | Diagnosis | ICD-10-CM |
| O60.22X9 | Term delivery with preterm labor, second trimester, other fetus | Diagnosis | ICD-10-CM |
| O60.23X0 | Term delivery with preterm labor, third trimester, not applicable or unspecified | Diagnosis | ICD-10-CM |
| O60.23X1 | Term delivery with preterm labor, third trimester, fetus 1 | Diagnosis | ICD-10-CM |
| O60.23X2 | Term delivery with preterm labor, third trimester, fetus 2 | Diagnosis | ICD-10-CM |
| O60.23X3 | Term delivery with preterm labor, third trimester, fetus 3 | Diagnosis | ICD-10-CM |
| O60.23X4 | Term delivery with preterm labor, third trimester, fetus 4 | Diagnosis | ICD-10-CM |
| O60.23X5 | Term delivery with preterm labor, third trimester, fetus 5 | Diagnosis | ICD-10-CM |
| O60.23X9 | Term delivery with preterm labor, third trimester, other fetus | Diagnosis | ICD-10-CM |
| O6012X0 | Preterm labor second trimester with preterm delivery second trimester | Diagnosis | ICD-10-CM |
| O6012X1 | Preterm labor second trimester with preterm delivery second trimester | Diagnosis | ICD-10-CM |
| O6012X2 | Preterm labor second trimester with preterm delivery second trimester | Diagnosis | ICD-10-CM |
| O6012X3 | Preterm labor second trimester with preterm delivery second trimester | Diagnosis | ICD-10-CM |
| O6012X4 | Preterm labor second trimester with preterm delivery second trimester | Diagnosis | ICD-10-CM |
| O6012X5 | Preterm labor second trimester with preterm delivery second trimester | Diagnosis | ICD-10-CM |
| O6012X9 | Preterm labor second trimester with preterm delivery second trimester | Diagnosis | ICD-10-CM |
| O6013X0 | Preterm labor second trimester with preterm delivery third trimester | Diagnosis | ICD-10-CM |
| O6013X1 | Preterm labor second trimester with preterm delivery third trimester | Diagnosis | ICD-10-CM |
| O6013X2 | Preterm labor second trimester with preterm delivery third trimester | Diagnosis | ICD-10-CM |
| O6013X3 | Preterm labor second trimester with preterm delivery third trimester | Diagnosis | ICD-10-CM |
| O6013X4 | Preterm labor second trimester with preterm delivery third trimester | Diagnosis | ICD-10-CM |
| O6013X5 | Preterm labor second trimester with preterm delivery third trimester | Diagnosis | ICD-10-CM |
| O6013X9 | Preterm labor second trimester with preterm delivery third trimester | Diagnosis | ICD-10-CM |
| O6014X0 | Preterm labor third trimester with preterm delivery third trimester | Diagnosis | ICD-10-CM |
| O6014X1 | Preterm labor third trimester with preterm delivery third trimester | Diagnosis | ICD-10-CM |
| O6014X2 | Preterm labor third trimester with preterm delivery third trimester | Diagnosis | ICD-10-CM |
| O6014X3 | Preterm labor third trimester with preterm delivery third trimester | Diagnosis | ICD-10-CM |
| O6014X4 | Preterm labor third trimester with preterm delivery third trimester | Diagnosis | ICD-10-CM |
| O6014X5 | Preterm labor third trimester with preterm delivery third trimester | Diagnosis | ICD-10-CM |
| O6014X9 | Preterm labor third trimester with preterm delivery third trimester | Diagnosis | ICD-10-CM |
| O63.2 | Delayed delivery of second twin, triplet, etc. | Diagnosis | ICD-10-CM |
| O67.0 | Intrapartum hemorrhage with coagulation defect | Diagnosis | ICD-10-CM |
| O67.8 | Other intrapartum hemorrhage | Diagnosis | ICD-10-CM |
| O67.9 | Intrapartum hemorrhage, unspecified | Diagnosis | ICD-10-CM |
| O68 | Labor and delivery complicated by abnormality of fetal acid-base balance | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| O69.0XX0 | Labor and delivery complicated by prolapse of cord, not applicable or unspecified | Diagnosis | ICD-10-CM |
| O69.0XX1 | Labor and delivery complicated by prolapse of cord, fetus 1 | Diagnosis | ICD-10-CM |
| O69.0XX2 | Labor and delivery complicated by prolapse of cord, fetus 2 | Diagnosis | ICD-10-CM |
| O69.0XX3 | Labor and delivery complicated by prolapse of cord, fetus 3 | Diagnosis | ICD-10-CM |
| O69.0XX4 | Labor and delivery complicated by prolapse of cord, fetus 4 | Diagnosis | ICD-10-CM |
| O69.0XX5 | Labor and delivery complicated by prolapse of cord, fetus 5 | Diagnosis | ICD-10-CM |
| O69.0XX9 | Labor and delivery complicated by prolapse of cord, other fetus | Diagnosis | ICD-10-CM |
| O69.1XX0 | Labor and delivery complicated by cord around neck, with compression, not applicable | Diagnosis | ICD-10-CM |
| O69.1XX1 | Labor and delivery complicated by cord around neck, with compression, fetus 1 | Diagnosis | ICD-10-CM |
| O69.1XX2 | Labor and delivery complicated by cord around neck, with compression, fetus 2 | Diagnosis | ICD-10-CM |
| O69.1XX3 | Labor and delivery complicated by cord around neck, with compression, fetus 3 | Diagnosis | ICD-10-CM |
| O69.1XX4 | Labor and delivery complicated by cord around neck, with compression, fetus 4 | Diagnosis | ICD-10-CM |
| O69.1XX5 | Labor and delivery complicated by cord around neck, with compression, fetus 5 | Diagnosis | ICD-10-CM |
| O69.1XX9 | Labor and delivery complicated by cord around neck, with compression, other fetus | Diagnosis | ICD-10-CM |
| O69.2XX0 | Labor and delivery complicated by other cord entanglement, with compression, not | Diagnosis | ICD-10-CM |
| O69.2XX1 | Labor and delivery complicated by other cord entanglement, with compression, fetus 1 | Diagnosis | ICD-10-CM |
| O69.2XX2 | Labor and delivery complicated by other cord entanglement, with compression, fetus 2 | Diagnosis | ICD-10-CM |
| O69.2XX3 | Labor and delivery complicated by other cord entanglement, with compression, fetus 3 | Diagnosis | ICD-10-CM |
| O69.2XX4 | Labor and delivery complicated by other cord entanglement, with compression, fetus 4 | Diagnosis | ICD-10-CM |
| O69.2XX5 | Labor and delivery complicated by other cord entanglement, with compression, fetus 5 | Diagnosis | ICD-10-CM |
| O69.2XX9 | Labor and delivery complicated by other cord entanglement, with compression, other | Diagnosis | ICD-10-CM |
| O69.3XX0 | Labor and delivery complicated by short cord, not applicable or unspecified | Diagnosis | ICD-10-CM |
| O69.3XX1 | Labor and delivery complicated by short cord, fetus 1 | Diagnosis | ICD-10-CM |
| O69.3XX2 | Labor and delivery complicated by short cord, fetus 2 | Diagnosis | ICD-10-CM |
| O69.3XX3 | Labor and delivery complicated by short cord, fetus 3 | Diagnosis | ICD-10-CM |
| O69.3XX4 | Labor and delivery complicated by short cord, fetus 4 | Diagnosis | ICD-10-CM |
| O69.3XX5 | Labor and delivery complicated by short cord, fetus 5 | Diagnosis | ICD-10-CM |
| O69.3XX9 | Labor and delivery complicated by short cord, other fetus | Diagnosis | ICD-10-CM |
| O69.4XX0 | Labor and delivery complicated by vasa previa, not applicable or unspecified | Diagnosis | ICD-10-CM |
| O69.4XX1 | Labor and delivery complicated by vasa previa, fetus 1 | Diagnosis | ICD-10-CM |
| O69.4XX2 | Labor and delivery complicated by vasa previa, fetus 2 | Diagnosis | ICD-10-CM |
| O69.4XX3 | Labor and delivery complicated by vasa previa, fetus 3 | Diagnosis | ICD-10-CM |
| O69.4XX4 | Labor and delivery complicated by vasa previa, fetus 4 | Diagnosis | ICD-10-CM |
| O69.4XX5 | Labor and delivery complicated by vasa previa, fetus 5 | Diagnosis | ICD-10-CM |
| O69.4XX9 | Labor and delivery complicated by vasa previa, other fetus | Diagnosis | ICD-10-CM |
| O69.5XX0 | Labor and delivery complicated by vascular lesion of cord, not applicable or | Diagnosis | ICD-10-CM |
| O69.5XX1 | Labor and delivery complicated by vascular lesion of cord, fetus 1 | Diagnosis | ICD-10-CM |
| O69.5XX2 | Labor and delivery complicated by vascular lesion of cord, fetus 2 | Diagnosis | ICD-10-CM |
| O69.5XX3 | Labor and delivery complicated by vascular lesion of cord, fetus 3 | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|---|---------------|-----------|
| O69.5XX4 | Labor and delivery complicated by vascular lesion of cord, fetus 4 | Diagnosis | ICD-10-CM |
| O69.5XX5 | Labor and delivery complicated by vascular lesion of cord, fetus 5 | Diagnosis | ICD-10-CM |
| O69.5XX9 | Labor and delivery complicated by vascular lesion of cord, other fetus | Diagnosis | ICD-10-CM |
| O69.81X0 | Labor and delivery complicated by cord around neck, without compression, not | Diagnosis | ICD-10-CM |
| O69.81X1 | Labor and delivery complicated by cord around neck, without compression, fetus 1 | Diagnosis | ICD-10-CM |
| O69.81X2 | Labor and delivery complicated by cord around neck, without compression, fetus 2 | Diagnosis | ICD-10-CM |
| O69.81X3 | Labor and delivery complicated by cord around neck, without compression, fetus 3 | Diagnosis | ICD-10-CM |
| O69.81X4 | Labor and delivery complicated by cord around neck, without compression, fetus 4 | Diagnosis | ICD-10-CM |
| O69.81X5 | Labor and delivery complicated by cord around neck, without compression, fetus 5 | Diagnosis | ICD-10-CM |
| O69.81X9 | Labor and delivery complicated by cord around neck, without compression, other | Diagnosis | ICD-10-CM |
| O69.82X0 | Labor and delivery complicated by other cord entanglement, without compression, not | Diagnosis | ICD-10-CM |
| O69.82X1 | Labor and delivery complicated by other cord entanglement, without compression, | Diagnosis | ICD-10-CM |
| O69.82X2 | Labor and delivery complicated by other cord entanglement, without compression, | Diagnosis | ICD-10-CM |
| O69.82X3 | Labor and delivery complicated by other cord entanglement, without compression, | Diagnosis | ICD-10-CM |
| O69.82X4 | Labor and delivery complicated by other cord entanglement, without compression, | Diagnosis | ICD-10-CM |
| O69.82X5 | Labor and delivery complicated by other cord entanglement, without compression, | Diagnosis | ICD-10-CM |
| O69.82X9 | Labor and delivery complicated by other cord entanglement, without compression, | Diagnosis | ICD-10-CM |
| O69.89X0 | Labor and delivery complicated by other cord complications, not applicable or | Diagnosis | ICD-10-CM |
| O69.89X1 | Labor and delivery complicated by other cord complications, fetus 1 | Diagnosis | ICD-10-CM |
| O69.89X2 | Labor and delivery complicated by other cord complications, fetus 2 | Diagnosis | ICD-10-CM |
| O69.89X3 | Labor and delivery complicated by other cord complications, fetus 3 | Diagnosis | ICD-10-CM |
| O69.89X4 | Labor and delivery complicated by other cord complications, fetus 4 | Diagnosis | ICD-10-CM |
| O69.89X5 | Labor and delivery complicated by other cord complications, fetus 5 | Diagnosis | ICD-10-CM |
| O69.89X9 | Labor and delivery complicated by other cord complications, other fetus | Diagnosis | ICD-10-CM |
| O69.9XX0 | Labor and delivery complicated by cord complication, unspecified, not applicable or unspecified | Diagnosis | ICD-10-CM |
| O69.9XX1 | Labor and delivery complicated by cord complication, unspecified, fetus 1 | Diagnosis | ICD-10-CM |
| O69.9XX2 | Labor and delivery complicated by cord complication, unspecified, fetus 2 | Diagnosis | ICD-10-CM |
| O69.9XX3 | Labor and delivery complicated by cord complication, unspecified, fetus 3 | Diagnosis | ICD-10-CM |
| O69.9XX4 | Labor and delivery complicated by cord complication, unspecified, fetus 4 | Diagnosis | ICD-10-CM |
| O69.9XX5 | Labor and delivery complicated by cord complication, unspecified, fetus 5 | Diagnosis | ICD-10-CM |
| O69.9XX9 | Labor and delivery complicated by cord complication, unspecified, other fetus | Diagnosis | ICD-10-CM |
| O70.0 | First degree perineal laceration during delivery | Diagnosis | ICD-10-CM |
| O70.1 | Second degree perineal laceration during delivery | Diagnosis | ICD-10-CM |
| O70.20 | Third degree perineal laceration during delivery, unspecified | Diagnosis | ICD-10-CM |
| O70.21 | Third degree perineal laceration during delivery, IIIa | Diagnosis | ICD-10-CM |
| O70.22 | Third degree perineal laceration during delivery, IIIb | Diagnosis | ICD-10-CM |
| O70.23 | Third degree perineal laceration during delivery, IIIc | Diagnosis | ICD-10-CM |
| O70.3 | Fourth degree perineal laceration during delivery | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| O70.4 | Anal sphincter tear complicating delivery, not associated with third degree laceration | Diagnosis | ICD-10-CM |
| O70.9 | Perineal laceration during delivery, unspecified | Diagnosis | ICD-10-CM |
| O74.0 | Aspiration pneumonitis due to anesthesia during labor and delivery | Diagnosis | ICD-10-CM |
| O74.1 | Other pulmonary complications of anesthesia during labor and delivery | Diagnosis | ICD-10-CM |
| O74.2 | Cardiac complications of anesthesia during labor and delivery | Diagnosis | ICD-10-CM |
| O74.3 | Central nervous system complications of anesthesia during labor and delivery | Diagnosis | ICD-10-CM |
| O74.4 | Toxic reaction to local anesthesia during labor and delivery | Diagnosis | ICD-10-CM |
| O74.5 | Spinal and epidural anesthesia-induced headache during labor and delivery | Diagnosis | ICD-10-CM |
| O74.6 | Other complications of spinal and epidural anesthesia during labor and delivery | Diagnosis | ICD-10-CM |
| O74.7 | Failed or difficult intubation for anesthesia during labor and delivery | Diagnosis | ICD-10-CM |
| O74.8 | Other complications of anesthesia during labor and delivery | Diagnosis | ICD-10-CM |
| O74.9 | Complication of anesthesia during labor and delivery, unspecified | Diagnosis | ICD-10-CM |
| O75.0 | Maternal distress during labor and delivery | Diagnosis | ICD-10-CM |
| O75.1 | Shock during or following labor and delivery | Diagnosis | ICD-10-CM |
| O75.5 | Delayed delivery after artificial rupture of membranes | Diagnosis | ICD-10-CM |
| O75.81 | Maternal exhaustion complicating labor and delivery | Diagnosis | ICD-10-CM |
| O75.82 | Onset (spontaneous) of labor after 37 completed weeks of gestation but before 39 completed weeks gestation, with delivery by (planned) cesarean section | Diagnosis | ICD-10-CM |
| O75.89 | Other specified complications of labor and delivery | Diagnosis | ICD-10-CM |
| O75.9 | Complication of labor and delivery, unspecified | Diagnosis | ICD-10-CM |
| O76 | Abnormality in fetal heart rate and rhythm complicating labor and delivery | Diagnosis | ICD-10-CM |
| O77.0 | Labor and delivery complicated by meconium in amniotic fluid | Diagnosis | ICD-10-CM |
| O77.8 | Labor and delivery complicated by other evidence of fetal stress | Diagnosis | ICD-10-CM |
| O77.9 | Labor and delivery complicated by fetal stress, unspecified | Diagnosis | ICD-10-CM |
| O80 | Encounter for full-term uncomplicated delivery | Diagnosis | ICD-10-CM |
| O82 | Encounter for cesarean delivery without indication | Diagnosis | ICD-10-CM |
| O88.02 | Air embolism in childbirth | Diagnosis | ICD-10-CM |
| O88.12 | Amniotic fluid embolism in childbirth | Diagnosis | ICD-10-CM |
| O88.22 | Thromboembolism in childbirth | Diagnosis | ICD-10-CM |
| O88.32 | Pyemic and septic embolism in childbirth | Diagnosis | ICD-10-CM |
| O88.82 | Other embolism in childbirth | Diagnosis | ICD-10-CM |
| O98.02 | Tuberculosis complicating childbirth | Diagnosis | ICD-10-CM |
| O98.12 | Syphilis complicating childbirth | Diagnosis | ICD-10-CM |
| O98.22 | Gonorrhea complicating childbirth | Diagnosis | ICD-10-CM |
| O98.32 | Other infections with a predominantly sexual mode of transmission complicating childbirth | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| O98.42 | Viral hepatitis complicating childbirth | Diagnosis | ICD-10-CM |
| O98.52 | Other viral diseases complicating childbirth | Diagnosis | ICD-10-CM |
| O98.62 | Protozoal diseases complicating childbirth | Diagnosis | ICD-10-CM |
| O98.72 | Human immunodeficiency virus [HIV] disease complicating childbirth | Diagnosis | ICD-10-CM |
| O98.82 | Other maternal infectious and parasitic diseases complicating childbirth | Diagnosis | ICD-10-CM |
| O98.92 | Unspecified maternal infectious and parasitic disease complicating childbirth | Diagnosis | ICD-10-CM |
| O99.02 | Anemia complicating childbirth | Diagnosis | ICD-10-CM |
| O99.12 | Other diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism complicating childbirth | Diagnosis | ICD-10-CM |
| O99.214 | Obesity complicating childbirth | Diagnosis | ICD-10-CM |
| O99.284 | Endocrine, nutritional and metabolic diseases complicating childbirth | Diagnosis | ICD-10-CM |
| O99.314 | Alcohol use complicating childbirth | Diagnosis | ICD-10-CM |
| O99.324 | Drug use complicating childbirth | Diagnosis | ICD-10-CM |
| O99.334 | Smoking (tobacco) complicating childbirth | Diagnosis | ICD-10-CM |
| O99.344 | Other mental disorders complicating childbirth | Diagnosis | ICD-10-CM |
| O99.354 | Diseases of the nervous system complicating childbirth | Diagnosis | ICD-10-CM |
| O99.42 | Diseases of the circulatory system complicating childbirth | Diagnosis | ICD-10-CM |
| O99.52 | Diseases of the respiratory system complicating childbirth | Diagnosis | ICD-10-CM |
| O99.62 | Diseases of the digestive system complicating childbirth | Diagnosis | ICD-10-CM |
| O99.72 | Diseases of the skin and subcutaneous tissue complicating childbirth | Diagnosis | ICD-10-CM |
| O99.814 | Abnormal glucose complicating childbirth | Diagnosis | ICD-10-CM |
| O99.824 | Streptococcus B carrier state complicating childbirth | Diagnosis | ICD-10-CM |
| O99.834 | Other infection carrier state complicating childbirth | Diagnosis | ICD-10-CM |
| O99.844 | Bariatric surgery status complicating childbirth | Diagnosis | ICD-10-CM |
| O9A.12 | Malignant neoplasm complicating childbirth | Diagnosis | ICD-10-CM |
| O9A.22 | Injury, poisoning and certain other consequences of external causes complicating | Diagnosis | ICD-10-CM |
| O9A.32 | Physical abuse complicating childbirth | Diagnosis | ICD-10-CM |
| O9A.42 | Sexual abuse complicating childbirth | Diagnosis | ICD-10-CM |
| O9A.52 | Psychological abuse complicating childbirth | Diagnosis | ICD-10-CM |
| P03.0 | Newborn affected by breech delivery and extraction | Diagnosis | ICD-10-CM |
| P03.2 | Newborn affected by forceps delivery | Diagnosis | ICD-10-CM |
| P03.3 | Newborn affected by delivery by vacuum extractor [ventouse] | Diagnosis | ICD-10-CM |
| P03.4 | Newborn affected by Cesarean delivery | Diagnosis | ICD-10-CM |
| P03.5 | Newborn affected by precipitate delivery | Diagnosis | ICD-10-CM |
| P07.00 | Extremely low birth weight newborn, unspecified weight | Diagnosis | ICD-10-CM |
| P07.01 | Extremely low birth weight newborn, less than 500 grams | Diagnosis | ICD-10-CM |
| P07.02 | Extremely low birth weight newborn, 500-749 grams | Diagnosis | ICD-10-CM |
| P07.03 | Extremely low birth weight newborn, 750-999 grams | Diagnosis | ICD-10-CM |
| P07.10 | Other low birth weight newborn, unspecified weight | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|---|---------------|-----------|
| P07.14 | Other low birth weight newborn, 1000-1249 grams | Diagnosis | ICD-10-CM |
| P07.15 | Other low birth weight newborn, 1250-1499 grams | Diagnosis | ICD-10-CM |
| P07.16 | Other low birth weight newborn, 1500-1749 grams | Diagnosis | ICD-10-CM |
| P07.17 | Other low birth weight newborn, 1750-1999 grams | Diagnosis | ICD-10-CM |
| P07.18 | Other low birth weight newborn, 2000-2499 grams | Diagnosis | ICD-10-CM |
| P07.20 | Extreme immaturity of newborn, unspecified weeks of gestation | Diagnosis | ICD-10-CM |
| P07.21 | Extreme immaturity of newborn, gestational age less than 23 completed weeks | Diagnosis | ICD-10-CM |
| P07.22 | Extreme immaturity of newborn, gestational age 23 completed weeks | Diagnosis | ICD-10-CM |
| P07.23 | Extreme immaturity of newborn, gestational age 24 completed weeks | Diagnosis | ICD-10-CM |
| P07.24 | Extreme immaturity of newborn, gestational age 25 completed weeks | Diagnosis | ICD-10-CM |
| P07.25 | Extreme immaturity of newborn, gestational age 26 completed weeks | Diagnosis | ICD-10-CM |
| P07.26 | Extreme immaturity of newborn, gestational age 27 completed weeks | Diagnosis | ICD-10-CM |
| P07.30 | Preterm newborn, unspecified weeks of gestation | Diagnosis | ICD-10-CM |
| P07.31 | Preterm newborn, gestational age 28 completed weeks | Diagnosis | ICD-10-CM |
| P07.32 | Preterm newborn, gestational age 29 completed weeks | Diagnosis | ICD-10-CM |
| P07.33 | Preterm newborn, gestational age 30 completed weeks | Diagnosis | ICD-10-CM |
| P07.34 | Preterm newborn, gestational age 31 completed weeks | Diagnosis | ICD-10-CM |
| P07.35 | Preterm newborn, gestational age 32 completed weeks | Diagnosis | ICD-10-CM |
| P07.36 | Preterm newborn, gestational age 33 completed weeks | Diagnosis | ICD-10-CM |
| P07.37 | Preterm newborn, gestational age 34 completed weeks | Diagnosis | ICD-10-CM |
| P07.38 | Preterm newborn, gestational age 35 completed weeks | Diagnosis | ICD-10-CM |
| P07.39 | Preterm newborn, gestational age 36 completed weeks | Diagnosis | ICD-10-CM |
| P0720 | Extreme immaturity of newborn, unspecified weeks of gestation | Diagnosis | ICD-10-CM |
| P0721 | Extreme immaturity of newborn, gestational age less than 23 completed weeks | Diagnosis | ICD-10-CM |
| P0722 | Extreme immaturity of newborn, gestational age 23 completed weeks | Diagnosis | ICD-10-CM |
| P0723 | Extreme immaturity of newborn, gestational age 24 completed weeks | Diagnosis | ICD-10-CM |
| P0724 | Extreme immaturity of newborn, gestational age 25 completed weeks | Diagnosis | ICD-10-CM |
| P0725 | Extreme immaturity of newborn, gestational age 26 completed weeks | Diagnosis | ICD-10-CM |
| P0726 | Extreme immaturity of newborn, gestational age 27 completed weeks | Diagnosis | ICD-10-CM |
| P0730 | Preterm newborn, unspecified weeks of gestation | Diagnosis | ICD-10-CM |
| P0731 | Preterm newborn, gestational age 28 completed weeks | Diagnosis | ICD-10-CM |
| P08.21 | Post-term newborn | Diagnosis | ICD-10-CM |
| P08.22 | Prolonged gestation of newborn | Diagnosis | ICD-10-CM |
| Z37.0 | Single live birth | Diagnosis | ICD-10-CM |
| Z37.2 | Twins, both liveborn | Diagnosis | ICD-10-CM |
| Z37.3 | Twins, one liveborn and one stillborn | Diagnosis | ICD-10-CM |
| Z37.50 | Multiple births, unspecified, all liveborn | Diagnosis | ICD-10-CM |
| Z37.51 | Triplets, all liveborn | Diagnosis | ICD-10-CM |
| Z37.52 | Quadruplets, all liveborn | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| Z37.53 | Quintuplets, all liveborn | Diagnosis | ICD-10-CM |
| Z37.54 | Sextuplets, all liveborn | Diagnosis | ICD-10-CM |
| Z37.59 | Other multiple births, all liveborn | Diagnosis | ICD-10-CM |
| Z37.60 | Multiple births, unspecified, some liveborn | Diagnosis | ICD-10-CM |
| Z37.61 | Triplets, some liveborn | Diagnosis | ICD-10-CM |
| Z37.62 | Quadruplets, some liveborn | Diagnosis | ICD-10-CM |
| Z37.63 | Quintuplets, some liveborn | Diagnosis | ICD-10-CM |
| Z37.64 | Sextuplets, some liveborn | Diagnosis | ICD-10-CM |
| Z37.69 | Other multiple births, some liveborn | Diagnosis | ICD-10-CM |
| Z37.9 | Outcome of delivery, unspecified | Diagnosis | ICD-10-CM |
| Z38.00 | Single liveborn infant, delivered vaginally | Diagnosis | ICD-10-CM |
| Z38.01 | Single liveborn infant, delivered by cesarean | Diagnosis | ICD-10-CM |
| Z38.1 | Single liveborn infant, born outside hospital | Diagnosis | ICD-10-CM |
| Z38.2 | Single liveborn infant, unspecified as to place of birth | Diagnosis | ICD-10-CM |
| Z38.30 | Twin liveborn infant, delivered vaginally | Diagnosis | ICD-10-CM |
| Z38.31 | Twin liveborn infant, delivered by cesarean | Diagnosis | ICD-10-CM |
| Z38.4 | Twin liveborn infant, born outside hospital | Diagnosis | ICD-10-CM |
| Z38.5 | Twin liveborn infant, unspecified as to place of birth | Diagnosis | ICD-10-CM |
| Z38.61 | Triplet liveborn infant, delivered vaginally | Diagnosis | ICD-10-CM |
| Z38.62 | Triplet liveborn infant, delivered by cesarean | Diagnosis | ICD-10-CM |
| Z38.63 | Quadruplet liveborn infant, delivered vaginally | Diagnosis | ICD-10-CM |
| Z38.64 | Quadruplet liveborn infant, delivered by cesarean | Diagnosis | ICD-10-CM |
| Z38.65 | Quintuplet liveborn infant, delivered vaginally | Diagnosis | ICD-10-CM |
| Z38.66 | Quintuplet liveborn infant, delivered by cesarean | Diagnosis | ICD-10-CM |
| Z38.68 | Other multiple liveborn infant, delivered vaginally | Diagnosis | ICD-10-CM |
| Z38.69 | Other multiple liveborn infant, delivered by cesarean | Diagnosis | ICD-10-CM |
| Z38.7 | Other multiple liveborn infant, born outside hospital | Diagnosis | ICD-10-CM |
| Z38.8 | Other multiple liveborn infant, unspecified as to place of birth | Diagnosis | ICD-10-CM |
| Z3A.20 | 20 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.21 | 21 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.22 | 22 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.23 | 23 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.24 | 24 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.25 | 25 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.26 | 26 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.27 | 27 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.28 | 28 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.29 | 29 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.30 | 30 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---|--|----------------------|------------------|
| Z3A.31 | 31 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.32 | 32 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.33 | 33 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.34 | 34 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.35 | 35 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.36 | 36 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.37 | 37 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.38 | 38 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.39 | 39 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.40 | 40 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.41 | 41 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.42 | 42 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A.49 | Greater than 42 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A20 | 20 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A21 | 21 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A22 | 22 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A23 | 23 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A24 | 24 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A25 | 25 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A26 | 26 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A27 | 27 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A28 | 28 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Z3A29 | 29 weeks gestation of pregnancy | Diagnosis | ICD-10-CM |
| Pulmonary Hypertension or Pulmonary Embolism | | | |
| I26 | Pulmonary embolism | Diagnosis | ICD-10-CM |
| I26.0 | Pulmonary embolism with acute cor pulmonale | Diagnosis | ICD-10-CM |
| I26.01 | Septic pulmonary embolism with acute cor pulmonale | Diagnosis | ICD-10-CM |
| I26.02 | Saddle embolus of pulmonary artery with acute cor pulmonale | Diagnosis | ICD-10-CM |
| I26.09 | Other pulmonary embolism with acute cor pulmonale | Diagnosis | ICD-10-CM |
| I26.9 | Pulmonary embolism without acute cor pulmonale | Diagnosis | ICD-10-CM |
| I26.90 | Septic pulmonary embolism without acute cor pulmonale | Diagnosis | ICD-10-CM |
| I26.92 | Saddle embolus of pulmonary artery without acute cor pulmonale | Diagnosis | ICD-10-CM |
| I26.93 | Single subsegmental pulmonary embolism without acute cor pulmonale | Diagnosis | ICD-10-CM |
| I26.94 | Multiple subsegmental pulmonary emboli without acute cor pulmonale | Diagnosis | ICD-10-CM |
| I26.99 | Other pulmonary embolism without acute cor pulmonale | Diagnosis | ICD-10-CM |
| I27.0 | Pulmonary hypertension | Diagnosis | ICD-10-CM |
| Reactive Airway and Other Respiratory Diseases | | | |
| J66 | Airway disease due to specific organic dust | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------------------------|--|---------------|-----------|
| J66.0 | Byssinosis | Diagnosis | ICD-10-CM |
| J66.1 | Flax-dressers' disease | Diagnosis | ICD-10-CM |
| J66.2 | Cannabinosis | Diagnosis | ICD-10-CM |
| J66.8 | Airway disease due to other specific organic dusts | Diagnosis | ICD-10-CM |
| J67 | Hypersensitivity pneumonitis due to organic dust | Diagnosis | ICD-10-CM |
| J67.0 | Farmer's lung | Diagnosis | ICD-10-CM |
| J67.1 | Bagassosis | Diagnosis | ICD-10-CM |
| J67.2 | Bird fancier's lung | Diagnosis | ICD-10-CM |
| J67.3 | Suberosis | Diagnosis | ICD-10-CM |
| J67.4 | Maltworker's lung | Diagnosis | ICD-10-CM |
| J67.5 | Mushroom-worker's lung | Diagnosis | ICD-10-CM |
| J67.6 | Maple-bark-stripper's lung | Diagnosis | ICD-10-CM |
| J67.7 | Air conditioner and humidifier lung | Diagnosis | ICD-10-CM |
| J67.8 | Hypersensitivity pneumonitis due to other organic dusts | Diagnosis | ICD-10-CM |
| J67.9 | Hypersensitivity pneumonitis due to unspecified organic dust | Diagnosis | ICD-10-CM |
| J68 | Respiratory conditions due to inhalation of chemicals, gases, fumes and vapors | Diagnosis | ICD-10-CM |
| J68.0 | Bronchitis and pneumonitis due to chemicals, gases, fumes and vapors | Diagnosis | ICD-10-CM |
| J68.4 | Chronic respiratory conditions due to chemicals, gases, fumes and vapors | Diagnosis | ICD-10-CM |
| J68.8 | Other respiratory conditions due to chemicals, gases, fumes and vapors | Diagnosis | ICD-10-CM |
| J68.9 | Unspecified respiratory condition due to chemicals, gases, fumes and vapors | Diagnosis | ICD-10-CM |
| Sickle Cell Disease | | | |
| 000780883 | crizanlizumab-tmca | Dispensing | NDC |
| 727860101 | voxelotor | Dispensing | NDC |
| D57 | Sickle-cell disorders | Diagnosis | ICD-10-CM |
| D57.0 | Hb-SS disease with crisis | Diagnosis | ICD-10-CM |
| D57.00 | Hb-SS disease with crisis, unspecified | Diagnosis | ICD-10-CM |
| D57.01 | Hb-SS disease with acute chest syndrome | Diagnosis | ICD-10-CM |
| D57.02 | Hb-SS disease with splenic sequestration | Diagnosis | ICD-10-CM |
| D57.03 | Hb-SS disease with cerebral vascular involvement | Diagnosis | ICD-10-CM |
| D57.09 | Hb-SS disease with crisis with other specified complication | Diagnosis | ICD-10-CM |
| D57.1 | Sickle-cell disease without crisis | Diagnosis | ICD-10-CM |
| D57.2 | Sickle-cell/Hb-C disease | Diagnosis | ICD-10-CM |
| D57.20 | Sickle-cell/Hb-C disease without crisis | Diagnosis | ICD-10-CM |
| D57.21 | Sickle-cell/Hb-C disease with crisis | Diagnosis | ICD-10-CM |
| D57.211 | Sickle-cell/Hb-C disease with acute chest syndrome | Diagnosis | ICD-10-CM |
| D57.212 | Sickle-cell/Hb-C disease with splenic sequestration | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-----------------------------------|---|---------------|-----------|
| D57.213 | Sickle-cell/Hb-C disease with cerebral vascular involvement | Diagnosis | ICD-10-CM |
| D57.218 | Sickle-cell/Hb-C disease with crisis with other specified complication | Diagnosis | ICD-10-CM |
| D57.219 | Sickle-cell/Hb-C disease with crisis, unspecified | Diagnosis | ICD-10-CM |
| D57.3 | Sickle-cell trait | Diagnosis | ICD-10-CM |
| D57.4 | Sickle-cell thalassemia | Diagnosis | ICD-10-CM |
| D57.40 | Sickle-cell thalassemia without crisis | Diagnosis | ICD-10-CM |
| D57.41 | Sickle-cell thalassemia, unspecified, with crisis | Diagnosis | ICD-10-CM |
| D57.411 | Sickle-cell thalassemia, unspecified, with acute chest syndrome | Diagnosis | ICD-10-CM |
| D57.412 | Sickle-cell thalassemia, unspecified, with splenic sequestration | Diagnosis | ICD-10-CM |
| D57.413 | Sickle-cell thalassemia, unspecified, with cerebral vascular involvement | Diagnosis | ICD-10-CM |
| D57.418 | Sickle-cell thalassemia, unspecified, with crisis with other specified complication | Diagnosis | ICD-10-CM |
| D57.419 | Sickle-cell thalassemia, unspecified, with crisis | Diagnosis | ICD-10-CM |
| D57.42 | Sickle-cell thalassemia beta zero without crisis | Diagnosis | ICD-10-CM |
| D57.431 | Sickle-cell thalassemia beta zero with acute chest syndrome | Diagnosis | ICD-10-CM |
| D57.432 | Sickle-cell thalassemia beta zero with splenic sequestration | Diagnosis | ICD-10-CM |
| D57.433 | Sickle-cell thalassemia beta zero with cerebral vascular involvement | Diagnosis | ICD-10-CM |
| D57.438 | Sickle-cell thalassemia beta zero with crisis with other specified complication | Diagnosis | ICD-10-CM |
| D57.439 | Sickle-cell thalassemia beta zero with crisis, unspecified | Diagnosis | ICD-10-CM |
| D57.44 | Sickle-cell thalassemia beta plus without crisis | Diagnosis | ICD-10-CM |
| D57.451 | Sickle-cell thalassemia beta plus with acute chest syndrome | Diagnosis | ICD-10-CM |
| D57.452 | Sickle-cell thalassemia beta plus with splenic sequestration | Diagnosis | ICD-10-CM |
| D57.453 | Sickle-cell thalassemia beta plus with cerebral vascular involvement | Diagnosis | ICD-10-CM |
| D57.458 | Sickle-cell thalassemia beta plus with crisis with other specified complication | Diagnosis | ICD-10-CM |
| D57.459 | Sickle-cell thalassemia beta plus with crisis, unspecified | Diagnosis | ICD-10-CM |
| D57.8 | Other sickle-cell disorders | Diagnosis | ICD-10-CM |
| D57.80 | Other sickle-cell disorders without crisis | Diagnosis | ICD-10-CM |
| D57.81 | Other sickle-cell disorders with crisis | Diagnosis | ICD-10-CM |
| D57.811 | Other sickle-cell disorders with acute chest syndrome | Diagnosis | ICD-10-CM |
| D57.812 | Other sickle-cell disorders with splenic sequestration | Diagnosis | ICD-10-CM |
| D57.813 | Other sickle-cell disorders with cerebral vascular involvement | Diagnosis | ICD-10-CM |
| D57.818 | Other sickle-cell disorders with crisis with other specified complication | Diagnosis | ICD-10-CM |
| D57.819 | Other sickle-cell disorders with crisis, unspecified | Diagnosis | ICD-10-CM |
| J0791 | Injection, crizanlizumab-tmca, 5 mg | Procedure | HCPCS |
| Smoking Current and Former | | | |
| 1032F | Current tobacco smoker or currently exposed to secondhand smoke (asthma) | Procedure | HCPCS |
| 1034F | Current tobacco smoker (cad, cap, copd, pv) (dm) | Procedure | HCPCS |
| 1035F | Current smokeless tobacco user (eg, chew, snuff) (pv) | Procedure | HCPCS |
| 4000F | Tobacco use cessation intervention, counseling (copd, cap, cad, asthma) (dm) (pv) | Procedure | HCPCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| 4001F | Tobacco use cessation intervention, pharmacologic therapy (copd, cad, cap, pv, asthma) (dm) (pv) | Procedure | HCPCS |
| 4004F | Patient screened for tobacco use and received tobacco cessation intervention (counseling, pharmacotherapy, or both), if identified as a tobacco user (pv, cad) | Procedure | HCPCS |
| 99406 | Smoking and tobacco use intermediate counseling, greater than 3 minutes up to 10 minutes | Procedure | HCPCS |
| 99407 | Smoking and tobacco use intensive counseling, greater than 10 minutes | Procedure | HCPCS |
| C9801 | Smoking and tobacco cessation counseling visit for the asymptomatic patient; intermediate, greater than 3 minutes, up to 10 minutes | Procedure | HCPCS |
| C9802 | Smoking and tobacco cessation counseling visit for the asymptomatic patient; intensive, greater than 10 minutes | Procedure | HCPCS |
| D1320 | Tobacco counseling for the control and prevention of oral disease | Procedure | HCPCS |
| F17200 | Nicotine dependence, unspecified, uncomplicated | Diagnosis | ICD-10-CM |
| F17201 | Nicotine dependence, unspecified, in remission | Diagnosis | ICD-10-CM |
| F17203 | Nicotine dependence unspecified, with withdrawal | Diagnosis | ICD-10-CM |
| F17208 | Nicotine dependence, unspecified, with other nicotine-induced disorders | Diagnosis | ICD-10-CM |
| F17209 | Nicotine dependence, unspecified, with unspecified nicotine-induced disorders | Diagnosis | ICD-10-CM |
| F17210 | Nicotine dependence, cigarettes, uncomplicated | Diagnosis | ICD-10-CM |
| F17211 | Nicotine dependence, cigarettes, in remission | Diagnosis | ICD-10-CM |
| F17213 | Nicotine dependence, cigarettes, with withdrawal | Diagnosis | ICD-10-CM |
| F17218 | Nicotine dependence, cigarettes, with other nicotine-induced disorders | Diagnosis | ICD-10-CM |
| F17219 | Nicotine dependence, cigarettes, with unspecified nicotine-induced disorders | Diagnosis | ICD-10-CM |
| F17220 | Nicotine dependence, chewing tobacco, uncomplicated | Diagnosis | ICD-10-CM |
| F17221 | Nicotine dependence, chewing tobacco, in remission | Diagnosis | ICD-10-CM |
| F17223 | Nicotine dependence, chewing tobacco, with withdrawal | Diagnosis | ICD-10-CM |
| F17228 | Nicotine dependence, chewing tobacco, with other nicotine-induced disorders | Diagnosis | ICD-10-CM |
| F17229 | Nicotine dependence, chewing tobacco, with unspecified nicotine-induced disorders | Diagnosis | ICD-10-CM |
| F17290 | Nicotine dependence, other tobacco product, uncomplicated | Diagnosis | ICD-10-CM |
| F17291 | Nicotine dependence, other tobacco product, in remission | Diagnosis | ICD-10-CM |
| F17293 | Nicotine dependence, other tobacco product, with withdrawal | Diagnosis | ICD-10-CM |
| F17298 | Nicotine dependence, other tobacco product, with other nicotine-induced disorders | Diagnosis | ICD-10-CM |
| F17299 | Nicotine dependence, other tobacco product, with unspecified nicotine-induced disorders | Diagnosis | ICD-10-CM |
| G0375 | SMOKING AND TOBACCO USE CESSATION COUNSELING VISIT; INTERMEDIATE, GREATER THAN 3 MINUTES UP TO 10 MINUTES | Procedure | HCPCS |
| G0376 | SMOKING AND TOBACCO USE CESSATION COUNSELING VISIT; INTENSIVE, GREATER THAN 10 MINUTES | Procedure | HCPCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------|--|---------------|-----------|
| G0436 | Smoking and tobacco cessation counseling visit for the asymptomatic patient; intermediate, greater than 3 minutes, up to 10 minutes | Procedure | HCPCS |
| G0437 | Smoking and tobacco cessation counseling visit for the asymptomatic patient; intensive, greater than 10 minutes | Procedure | HCPCS |
| G8093 | Newly diagnosed chronic obstructive pulmonary disease (copd) patient documented to have received smoking cessation intervention, within 3 months of diagnosis | Procedure | HCPCS |
| G8094 | Newly diagnosed chronic obstructive pulmonary disease (copd) patient not documented to have received smoking cessation intervention, within 3 months of diagnosis | Procedure | HCPCS |
| G8402 | Tobacco (smoke) use cessation intervention, counseling | Procedure | HCPCS |
| G8403 | Tobacco (smoke) use cessation intervention not counseled | Procedure | HCPCS |
| G8453 | Tobacco use cessation intervention, counseling | Procedure | HCPCS |
| G8454 | Tobacco use cessation intervention not counseled, reason not specified | Procedure | HCPCS |
| G8455 | Current tobacco smoker | Procedure | HCPCS |
| G8456 | Current smokeless tobacco user | Procedure | HCPCS |
| G8686 | Currently a tobacco smoker or current exposure to secondhand smoke | Procedure | HCPCS |
| G8688 | Currently a smokeless tobacco user (eg, chew, snuff) and no exposure to secondhand | Procedure | HCPCS |
| G8690 | Current tobacco smoker or current exposure to secondhand smoke | Procedure | HCPCS |
| G8692 | Current smokeless tobacco user (eg, chew, snuff) and no exposure to secondhand | Procedure | HCPCS |
| G9016 | Smoking cessation counseling, individual, in the absence of or in addition to any other evaluation and management service, per session (6-10 minutes) âdemo project code onlyã | Procedure | HCPCS |
| G9276 | Documentation that patient is a current tobacco user | Procedure | HCPCS |
| 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 q | Procedure | HCPCS |
| G9645 | Patients who did not abstain from smoking prior to anesthesia on the day of surgery or procedure | Procedure | HCPCS |
| G9792 | Most recent tobacco status is not tobacco free | Procedure | HCPCS |
| G9902 | Patient screened for tobacco use and identified as a tobacco user | Procedure | HCPCS |
| G9906 | Patient identified as a tobacco user received tobacco cessation intervention (counseling and/or pharmacotherapy) | Procedure | HCPCS |
| G9908 | Patient identified as tobacco user did not receive tobacco cessation intervention (counseling and/or pharmacotherapy), reason not given | Procedure | HCPCS |
| G9909 | Documentation of medical reason(s) for not providing tobacco cessation intervention if identified as a tobacco user (eg, limited life expectancy, other medical reason) | Procedure | HCPCS |
| S4990 | Nicotine patches, legend | Procedure | HCPCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|-----------|
| S4991 | Nicotine patches, non-legend | Procedure | HCPCS |
| S4995 | Smoking cessation gum | Procedure | HCPCS |
| S9075 | Smoking cessation treatment | Procedure | HCPCS |
| S9075 | Smoking cessation classes, non-physician provider, per session | Procedure | HCPCS |
| T65211A | Toxic effect of chewing tobacco, accidental (unintentional), initial encounter | Diagnosis | ICD-10-CM |
| T65211D | Toxic effect of chewing tobacco, accidental (unintentional), subsequent encounter | Diagnosis | ICD-10-CM |
| T65211S | Toxic effect of chewing tobacco, accidental (unintentional), sequela | Diagnosis | ICD-10-CM |
| T65212A | Toxic effect of chewing tobacco, intentional self-harm, initial encounter | Diagnosis | ICD-10-CM |
| T65212D | Toxic effect of chewing tobacco, intentional self-harm, subsequent encounter | Diagnosis | ICD-10-CM |
| T65212S | Toxic effect of chewing tobacco, intentional self-harm, sequela | Diagnosis | ICD-10-CM |
| T65213A | Toxic effect of chewing tobacco, assault, initial encounter | Diagnosis | ICD-10-CM |
| T65213D | Toxic effect of chewing tobacco, assault, subsequent encounter | Diagnosis | ICD-10-CM |
| T65213S | Toxic effect of chewing tobacco, assault, sequela | Diagnosis | ICD-10-CM |
| T65214A | Toxic effect of chewing tobacco, undetermined, initial encounter | Diagnosis | ICD-10-CM |
| T65214D | Toxic effect of chewing tobacco, undetermined, subsequent encounter | Diagnosis | ICD-10-CM |
| T65214S | Toxic effect of chewing tobacco, undetermined, sequela | Diagnosis | ICD-10-CM |
| T65221A | Toxic effect of tobacco cigarettes, accidental (unintentional), initial encounter | Diagnosis | ICD-10-CM |
| T65221D | Toxic effect of tobacco cigarettes, accidental (unintentional), subsequent encounter | Diagnosis | ICD-10-CM |
| T65221S | Toxic effect of tobacco cigarettes, accidental (unintentional), sequela | Diagnosis | ICD-10-CM |
| T65222A | Toxic effect of tobacco cigarettes, intentional self-harm, initial encounter | Diagnosis | ICD-10-CM |
| T65222D | Toxic effect of tobacco cigarettes, intentional self-harm, subsequent encounter | Diagnosis | ICD-10-CM |
| T65222S | Toxic effect of tobacco cigarettes, intentional self-harm, sequela | Diagnosis | ICD-10-CM |
| T65223A | Toxic effect of tobacco cigarettes, assault, initial encounter | Diagnosis | ICD-10-CM |
| T65223D | Toxic effect of tobacco cigarettes, assault, subsequent encounter | Diagnosis | ICD-10-CM |
| T65223S | Toxic effect of tobacco cigarettes, assault, sequela | Diagnosis | ICD-10-CM |
| T65224A | Toxic effect of tobacco cigarettes, undetermined, initial encounter | Diagnosis | ICD-10-CM |
| T65224D | Toxic effect of tobacco cigarettes, undetermined, subsequent encounter | Diagnosis | ICD-10-CM |
| T65224S | Toxic effect of tobacco cigarettes, undetermined, sequela | Diagnosis | ICD-10-CM |
| T65291A | Toxic effect of other tobacco and nicotine, accidental (unintentional), initial encounter | Diagnosis | ICD-10-CM |
| T65291D | Toxic effect of other tobacco and nicotine, accidental (unintentional), subsequent | Diagnosis | ICD-10-CM |
| T65291S | Toxic effect of other tobacco and nicotine, accidental (unintentional), sequela | Diagnosis | ICD-10-CM |
| T65292A | Toxic effect of other tobacco and nicotine, intentional self-harm, initial encounter | Diagnosis | ICD-10-CM |
| T65292D | Toxic effect of other tobacco and nicotine, intentional self-harm, subsequent | Diagnosis | ICD-10-CM |
| T65292S | Toxic effect of other tobacco and nicotine, intentional self-harm, sequela | Diagnosis | ICD-10-CM |
| T65293A | Toxic effect of other tobacco and nicotine, assault, initial encounter | Diagnosis | ICD-10-CM |
| T65293D | Toxic effect of other tobacco and nicotine, assault, subsequent encounter | Diagnosis | ICD-10-CM |
| T65293S | Toxic effect of other tobacco and nicotine, assault, sequela | Diagnosis | ICD-10-CM |
| T65294A | Toxic effect of other tobacco and nicotine, undetermined, initial encounter | Diagnosis | ICD-10-CM |
| T65294D | Toxic effect of other tobacco and nicotine, undetermined, subsequent encounter | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---|--|---------------|------------|
| T65294S | Toxic effect of other tobacco and nicotine, undetermined, sequela | Diagnosis | ICD-10-CM |
| Z716 | Tobacco abuse counseling | Diagnosis | ICD-10-CM |
| Z720 | Tobacco use | Diagnosis | ICD-10-CM |
| Z87891 | Personal history of nicotine dependence | Diagnosis | ICD-10-CM |
| Solid Organ or Blood Stem Cell Transplantation | | | |
| 0055U | Cardiology (heart transplant), cell-free DNA, PCR assay of 96 DNA target sequences (94 single nucleotide polymorphism targets and two control targets), plasma | Procedure | ICD-10-PCS |
| 0087U | Cardiology (heart transplant), mRNA gene expression profiling by microarray of 1283 genes, transplant biopsy tissue, allograft rejection and injury algorithm reported as a probability score | Procedure | ICD-10-PCS |
| 0088U | Transplantation medicine (kidney allograft rejection), microarray gene expression profiling of 1494 genes, utilizing transplant biopsy tissue, algorithm reported as a probability score for rejection | Procedure | ICD-10-PCS |
| 0141T | Pancreatic islet cell transplantation through portal vein, percutaneous | Procedure | ICD-10-PCS |
| 0142T | Pancreatic islet cell transplantation through portal vein, open | Procedure | ICD-10-PCS |
| 0143T | Laparoscopy, surgical, pancreatic islet cell transplantation through portal vein | Procedure | ICD-10-PCS |
| 02Y | Heart and Great Vessels, Transplantation | Procedure | ICD-10-PCS |
| 02YA | Transplantation / Heart | Procedure | ICD-10-PCS |
| 02YA0Z0 | Transplantation of Heart, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 02YA0Z1 | Transplantation of Heart, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 02YA0Z2 | Transplantation of Heart, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0584T | Islet cell transplant, includes portal vein catheterization and infusion, including all imaging, including guidance, and radiological supervision and interpretation, when performed; percutaneous | Procedure | ICD-10-PCS |
| 0585T | Islet cell transplant, includes portal vein catheterization and infusion, including all imaging, including guidance, and radiological supervision and interpretation, when performed; laparoscopic | Procedure | ICD-10-PCS |
| 0586T | Islet cell transplant, includes portal vein catheterization and infusion, including all imaging, including guidance, and radiological supervision and interpretation, when performed; open | Procedure | ICD-10-PCS |
| 07Y | Lymphatic and Hemic Systems, Transplantation | Procedure | ICD-10-PCS |
| 07YM | Transplantation / Thymus | Procedure | ICD-10-PCS |
| 07YM0Z0 | Transplantation of Thymus, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 07YM0Z1 | Transplantation of Thymus, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 07YM0Z2 | Transplantation of Thymus, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 07YP | Transplantation / Spleen | Procedure | ICD-10-PCS |
| 07YP0Z0 | Transplantation of Spleen, Allogeneic, Open Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| 07YPOZ1 | Transplantation of Spleen, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 07YPOZ2 | Transplantation of Spleen, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0BY | Respiratory System, Transplantation | Procedure | ICD-10-PCS |
| 0BYC | Transplantation / Upper Lung Lobe, Right | Procedure | ICD-10-PCS |
| 0BYCOZ0 | Transplantation of Right Upper Lung Lobe, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYCOZ1 | Transplantation of Right Upper Lung Lobe, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYCOZ2 | Transplantation of Right Upper Lung Lobe, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0BYD | Transplantation / Middle Lung Lobe, Right | Procedure | ICD-10-PCS |
| 0BYDOZ0 | Transplantation of Right Middle Lung Lobe, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYDOZ1 | Transplantation of Right Middle Lung Lobe, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYDOZ2 | Transplantation of Right Middle Lung Lobe, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0BYF | Transplantation / Lower Lung Lobe, Right | Procedure | ICD-10-PCS |
| 0BYFOZ0 | Transplantation of Right Lower Lung Lobe, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYFOZ1 | Transplantation of Right Lower Lung Lobe, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYFOZ2 | Transplantation of Right Lower Lung Lobe, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0BYG | Transplantation / Upper Lung Lobe, Left | Procedure | ICD-10-PCS |
| 0BYGOZ0 | Transplantation of Left Upper Lung Lobe, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYGOZ1 | Transplantation of Left Upper Lung Lobe, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYGOZ2 | Transplantation of Left Upper Lung Lobe, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0BYH | Transplantation / Lung Lingula | Procedure | ICD-10-PCS |
| 0BYHOZ0 | Transplantation of Lung Lingula, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYHOZ1 | Transplantation of Lung Lingula, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYHOZ2 | Transplantation of Lung Lingula, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0BYJ | Transplantation / Lower Lung Lobe, Left | Procedure | ICD-10-PCS |
| 0BYJOZ0 | Transplantation of Left Lower Lung Lobe, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYJOZ1 | Transplantation of Left Lower Lung Lobe, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYJOZ2 | Transplantation of Left Lower Lung Lobe, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0BYK | Transplantation / Lung, Right | Procedure | ICD-10-PCS |
| 0BYKOZ0 | Transplantation of Right Lung, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYKOZ1 | Transplantation of Right Lung, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYKOZ2 | Transplantation of Right Lung, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0BYL | Transplantation / Lung, Left | Procedure | ICD-10-PCS |
| 0BYLOZ0 | Transplantation of Left Lung, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYLOZ1 | Transplantation of Left Lung, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYLOZ2 | Transplantation of Left Lung, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0BYM | Transplantation / Lungs, Bilateral | Procedure | ICD-10-PCS |
| 0BYMOZ0 | Transplantation of Bilateral Lungs, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYMOZ1 | Transplantation of Bilateral Lungs, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0BYMOZ2 | Transplantation of Bilateral Lungs, Zooplastic, Open Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| ODY | Gastrointestinal System, Transplantation | Procedure | ICD-10-PCS |
| ODY5 | Transplantation / Esophagus | Procedure | ICD-10-PCS |
| ODY50Z0 | Transplantation of Esophagus, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| ODY50Z1 | Transplantation of Esophagus, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| ODY50Z2 | Transplantation of Esophagus, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| ODY6 | Transplantation / Stomach | Procedure | ICD-10-PCS |
| ODY60Z0 | Transplantation of Stomach, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| ODY60Z1 | Transplantation of Stomach, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| ODY60Z2 | Transplantation of Stomach, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| ODY8 | Transplantation / Small Intestine | Procedure | ICD-10-PCS |
| ODY80Z0 | Transplantation of Small Intestine, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| ODY80Z1 | Transplantation of Small Intestine, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| ODY80Z2 | Transplantation of Small Intestine, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| ODYE | Transplantation / Large Intestine | Procedure | ICD-10-PCS |
| ODYE0Z0 | Transplantation of Large Intestine, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| ODYE0Z1 | Transplantation of Large Intestine, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| ODYE0Z2 | Transplantation of Large Intestine, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| OFY | Hepatobiliary System and Pancreas, Transplantation | Procedure | ICD-10-PCS |
| OFY0 | Transplantation / Liver | Procedure | ICD-10-PCS |
| OFY00Z0 | Transplantation of Liver, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| OFY00Z1 | Transplantation of Liver, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| OFY00Z2 | Transplantation of Liver, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| OFYG | Transplantation / Pancreas | Procedure | ICD-10-PCS |
| OFYG0Z0 | Transplantation of Pancreas, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| OFYG0Z1 | Transplantation of Pancreas, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| OFYG0Z2 | Transplantation of Pancreas, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| OTY | Urinary System, Transplantation | Procedure | ICD-10-PCS |
| OTY0 | Transplantation / Kidney, Right | Procedure | ICD-10-PCS |
| OTY00Z0 | Transplantation of Right Kidney, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| OTY00Z1 | Transplantation of Right Kidney, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| OTY00Z2 | Transplantation of Right Kidney, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| OTY1 | Transplantation / Kidney, Left | Procedure | ICD-10-PCS |
| OTY10Z0 | Transplantation of Left Kidney, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| OTY10Z1 | Transplantation of Left Kidney, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| OTY10Z2 | Transplantation of Left Kidney, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| OUY | Female Reproductive System, Transplantation | Procedure | ICD-10-PCS |
| OUY0 | Transplantation / Ovary, Right | Procedure | ICD-10-PCS |
| OUY00Z0 | Transplantation of Right Ovary, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| OUY00Z1 | Transplantation of Right Ovary, Syngeneic, Open Approach | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|---|---------------|------------|
| 0UY00Z2 | Transplantation of Right Ovary, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0UY1 | Transplantation / Ovary, Left | Procedure | ICD-10-PCS |
| 0UY10Z0 | Transplantation of Left Ovary, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0UY10Z1 | Transplantation of Left Ovary, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0UY10Z2 | Transplantation of Left Ovary, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0UY9 | Transplantation / Uterus | Procedure | ICD-10-PCS |
| 0UY90Z0 | Transplantation of Uterus, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0UY90Z1 | Transplantation of Uterus, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0UY90Z2 | Transplantation of Uterus, Zooplastic, Open Approach | Procedure | ICD-10-PCS |
| 0WY | Anatomical Regions, General, Transplantation | Procedure | ICD-10-PCS |
| 0WY2 | Transplantation / Face | Procedure | ICD-10-PCS |
| 0WY20Z0 | Transplantation of Face, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0WY20Z1 | Transplantation of Face, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0XY | Anatomical Regions, Upper Extremities, Transplantation | Procedure | ICD-10-PCS |
| 0XYJ | Transplantation / Hand, Right | Procedure | ICD-10-PCS |
| 0XYJ0Z0 | Transplantation of Right Hand, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0XYJ0Z1 | Transplantation of Right Hand, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 0XYK | Transplantation / Hand, Left | Procedure | ICD-10-PCS |
| 0XYK0Z0 | Transplantation of Left Hand, Allogeneic, Open Approach | Procedure | ICD-10-PCS |
| 0XYK0Z1 | Transplantation of Left Hand, Syngeneic, Open Approach | Procedure | ICD-10-PCS |
| 23440 | Resection or transplantation of long tendon of biceps | Procedure | ICD-10-PCS |
| 29868 | Arthroscopy, knee, surgical; meniscal transplantation (includes arthrotomy for meniscal insertion), medial or lateral | Procedure | ICD-10-PCS |
| 32851 | Lung transplant, single; without cardiopulmonary bypass | Procedure | ICD-10-PCS |
| 32852 | Lung transplant, single; with cardiopulmonary bypass | Procedure | ICD-10-PCS |
| 32853 | Lung transplant, double (bilateral sequential or en bloc); without cardiopulmonary bypass | Procedure | ICD-10-PCS |
| 32854 | Lung transplant, double (bilateral sequential or en bloc); with cardiopulmonary bypass | Procedure | ICD-10-PCS |
| 33927 | Implantation of a total replacement heart system (artificial heart) with recipient cardiectomy | Procedure | ICD-10-PCS |
| 33935 | Heart-lung transplant with recipient cardiectomy-pneumonectomy | Procedure | ICD-10-PCS |
| 33945 | Heart transplant, with or without recipient cardiectomy | Procedure | ICD-10-PCS |
| 43625 | GASTRECTOMY,TOTAL;W REPAIR INTESTINAL TRANSPLANT | Procedure | ICD-10-PCS |
| 44135 | Intestinal allotransplantation; from cadaver donor | Procedure | ICD-10-PCS |
| 44136 | Intestinal allotransplantation; from living donor | Procedure | ICD-10-PCS |
| 47135 | Liver allotransplantation, orthotopic, partial or whole, from cadaver or living donor, any age | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------|---|---------------|------------|
| 47136 | Liver allotransplantation; heterotopic, partial or whole, from cadaver or living donor, any age | Procedure | ICD-10-PCS |
| 48160 | Pancreatectomy, total or subtotal, with autologous transplantation of pancreas or pancreatic islet cells | Procedure | ICD-10-PCS |
| 48554 | Transplantation of pancreatic allograft | Procedure | ICD-10-PCS |
| 50340 | Recipient nephrectomy (separate procedure) | Procedure | ICD-10-PCS |
| 50360 | Renal allotransplantation, implantation of graft; without recipient nephrectomy | Procedure | ICD-10-PCS |
| 50365 | Renal allotransplantation, implantation of graft; with recipient nephrectomy | Procedure | ICD-10-PCS |
| 50366 | Renal Homotransplantation, Implantation Of Graft | Procedure | ICD-10-PCS |
| 50380 | Renal autotransplantation, reimplantation of kidney | Procedure | ICD-10-PCS |
| 60510 | Transplantation Of Parathyroid Gland(s) During Thyroidectomy | Procedure | ICD-10-PCS |
| 60512 | Parathyroid autotransplantation (List separately in addition to code for primary procedure) | Procedure | ICD-10-PCS |
| 65710 | Keratoplasty (corneal transplant); anterior lamellar | Procedure | ICD-10-PCS |
| 65720 | Keratoplasty (corneal Transplant), Lamellar | Procedure | ICD-10-PCS |
| 65725 | Keratoplasty (corneal Transplant), Lamellar | Procedure | ICD-10-PCS |
| 65730 | Keratoplasty (corneal transplant); penetrating (except in aphakia or pseudophakia) | Procedure | ICD-10-PCS |
| 65740 | Keratoplasty (corneal Transplant), Penetrating (except In | Procedure | ICD-10-PCS |
| 65745 | Keratoplasty (corneal Transplant), Penetrating (except In | Procedure | ICD-10-PCS |
| 65750 | Keratoplasty (corneal transplant); penetrating (in aphakia) | Procedure | ICD-10-PCS |
| 65755 | Keratoplasty (corneal transplant); penetrating (in pseudophakia) | Procedure | ICD-10-PCS |
| 65756 | Keratoplasty (corneal transplant); endothelial | Procedure | ICD-10-PCS |
| 65767 | Epikeratoplasty | Procedure | ICD-10-PCS |
| 65780 | Ocular surface reconstruction; amniotic membrane transplantation, multiple layers | Procedure | ICD-10-PCS |
| 65781 | Ocular surface reconstruction; limbal stem cell allograft (eg, cadaveric or living donor) | Procedure | ICD-10-PCS |
| 65782 | Ocular surface reconstruction; limbal conjunctival autograft (includes obtaining graft) | Procedure | ICD-10-PCS |
| 76776 | Ultrasound, transplanted kidney, real time and duplex Doppler with image documentation | Procedure | ICD-10-PCS |
| 76778 | Ultrasound, transplanted kidney, B-scan and/or real time with image documentation, with or without duplex Doppler study | Procedure | ICD-10-PCS |
| 81495 | Cardiology (heart transplant), mRNA, gene expression profiling by real-time quantitative PCR of 20 genes (11 content and 9 housekeeping), utilizing subfraction of peripheral blood, algorithm reported as a rejection risk score | Procedure | ICD-10-PCS |
| 81595 | Cardiology (heart transplant), mRNA, gene expression profiling by real-time quantitative PCR of 20 genes (11 content and 9 housekeeping), utilizing subfraction of peripheral blood, algorithm reported as a rejection risk score | Procedure | ICD-10-PCS |
| G0341 | Percutaneous islet cell transplant, includes portal vein catheterization and infusion | Procedure | HCPCS |
| G0342 | Laparoscopy for islet cell transplant, includes portal vein catheterization and infusion | Procedure | HCPCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------|--|---------------|-----------|
| G0343 | Laparotomy for islet cell transplant, includes portal vein catheterization and infusion | Procedure | HCPCS |
| S2052 | Transplantation of small intestine allograft (there are cpt codes available for intestinal allotransplantation - 44135 for graft from cadaver donor or 44136 for graft from living donor) | Procedure | HCPCS |
| S2053 | Transplantation of small intestine and liver allografts | Procedure | HCPCS |
| S2054 | Transplantation of multivisceral organs | Procedure | HCPCS |
| S2060 | Lobar lung transplantation | Procedure | HCPCS |
| S2065 | Simultaneous pancreas kidney transplantation | Procedure | HCPCS |
| S2102 | Islet cell tissue transplant from pancreas; allogeneic | Procedure | HCPCS |
| S2103 | Adrenal tissue transplant to brain | Procedure | HCPCS |
| S2109 | Autologous chondrocyte transplantation (preparation of autologous cultured chondrocytes) | Procedure | HCPCS |
| S2152 | Solid organ(s), complete or segmental, single organ or combination of organs; deceased or living donor(s), procurement, transplantation, and related complications; including: drugs; supplies; hospitalization with outpatient follow-up; medical/surgical, diagnostic, emergency, and rehabilitative services, and the number of days of pre- and posttransplant care in the global definition | Procedure | HCPCS |

Substance Use Disorders

| | | | |
|---------|---|-----------|-----------|
| F10 | Alcohol related disorders | Diagnosis | ICD-10-CM |
| F10.1 | Alcohol abuse | Diagnosis | ICD-10-CM |
| F10.10 | Alcohol abuse, uncomplicated | Diagnosis | ICD-10-CM |
| F10.11 | Alcohol abuse, in remission | Diagnosis | ICD-10-CM |
| F10.12 | Alcohol abuse with intoxication | Diagnosis | ICD-10-CM |
| F10.120 | Alcohol abuse with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F10.121 | Alcohol abuse with intoxication delirium | Diagnosis | ICD-10-CM |
| F10.129 | Alcohol abuse with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F10.14 | Alcohol abuse with alcohol-induced mood disorder | Diagnosis | ICD-10-CM |
| F10.15 | Alcohol abuse with alcohol-induced psychotic disorder | Diagnosis | ICD-10-CM |
| F10.150 | Alcohol abuse with alcohol-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F10.151 | Alcohol abuse with alcohol-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F10.159 | Alcohol abuse with alcohol-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F10.18 | Alcohol abuse with other alcohol-induced disorders | Diagnosis | ICD-10-CM |
| F10.180 | Alcohol abuse with alcohol-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F10.181 | Alcohol abuse with alcohol-induced sexual dysfunction | Diagnosis | ICD-10-CM |
| F10.182 | Alcohol abuse with alcohol-induced sleep disorder | Diagnosis | ICD-10-CM |
| F10.188 | Alcohol abuse with other alcohol-induced disorder | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| F10.19 | Alcohol abuse with unspecified alcohol-induced disorder | Diagnosis | ICD-10-CM |
| F10.2 | Alcohol dependence | Diagnosis | ICD-10-CM |
| F10.20 | Alcohol dependence, uncomplicated | Diagnosis | ICD-10-CM |
| F10.21 | Alcohol dependence, in remission | Diagnosis | ICD-10-CM |
| F10.22 | Alcohol dependence with intoxication | Diagnosis | ICD-10-CM |
| F10.220 | Alcohol dependence with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F10.221 | Alcohol dependence with intoxication delirium | Diagnosis | ICD-10-CM |
| F10.229 | Alcohol dependence with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F10.23 | Alcohol dependence with withdrawal | Diagnosis | ICD-10-CM |
| F10.230 | Alcohol dependence with withdrawal, uncomplicated | Diagnosis | ICD-10-CM |
| F10.231 | Alcohol dependence with withdrawal delirium | Diagnosis | ICD-10-CM |
| F10.232 | Alcohol dependence with withdrawal with perceptual disturbance | Diagnosis | ICD-10-CM |
| F10.239 | Alcohol dependence with withdrawal, unspecified | Diagnosis | ICD-10-CM |
| F10.24 | Alcohol dependence with alcohol-induced mood disorder | Diagnosis | ICD-10-CM |
| F10.25 | Alcohol dependence with alcohol-induced psychotic disorder | Diagnosis | ICD-10-CM |
| F10.250 | Alcohol dependence with alcohol-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F10.251 | Alcohol dependence with alcohol-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F10.259 | Alcohol dependence with alcohol-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F10.26 | Alcohol dependence with alcohol-induced persisting amnestic disorder | Diagnosis | ICD-10-CM |
| F10.27 | Alcohol dependence with alcohol-induced persisting dementia | Diagnosis | ICD-10-CM |
| F10.28 | Alcohol dependence with other alcohol-induced disorders | Diagnosis | ICD-10-CM |
| F10.280 | Alcohol dependence with alcohol-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F10.281 | Alcohol dependence with alcohol-induced sexual dysfunction | Diagnosis | ICD-10-CM |
| F10.282 | Alcohol dependence with alcohol-induced sleep disorder | Diagnosis | ICD-10-CM |
| F10.288 | Alcohol dependence with other alcohol-induced disorder | Diagnosis | ICD-10-CM |
| F10.29 | Alcohol dependence with unspecified alcohol-induced disorder | Diagnosis | ICD-10-CM |
| F10.9 | Alcohol use, unspecified | Diagnosis | ICD-10-CM |
| F10.92 | Alcohol use, unspecified with intoxication | Diagnosis | ICD-10-CM |
| F10.920 | Alcohol use, unspecified with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F10.921 | Alcohol use, unspecified with intoxication delirium | Diagnosis | ICD-10-CM |
| F10.929 | Alcohol use, unspecified with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F10.94 | Alcohol use, unspecified with alcohol-induced mood disorder | Diagnosis | ICD-10-CM |
| F10.95 | Alcohol use, unspecified with alcohol-induced psychotic disorder | Diagnosis | ICD-10-CM |
| F10.950 | Alcohol use, unspecified with alcohol-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F10.951 | Alcohol use, unspecified with alcohol-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F10.959 | Alcohol use, unspecified with alcohol-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F10.96 | Alcohol use, unspecified with alcohol-induced persisting amnestic disorder | Diagnosis | ICD-10-CM |
| F10.97 | Alcohol use, unspecified with alcohol-induced persisting dementia | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| F10.98 | Alcohol use, unspecified with other alcohol-induced disorders | Diagnosis | ICD-10-CM |
| F10.980 | Alcohol use, unspecified with alcohol-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F10.981 | Alcohol use, unspecified with alcohol-induced sexual dysfunction | Diagnosis | ICD-10-CM |
| F10.982 | Alcohol use, unspecified with alcohol-induced sleep disorder | Diagnosis | ICD-10-CM |
| F10.988 | Alcohol use, unspecified with other alcohol-induced disorder | Diagnosis | ICD-10-CM |
| F10.99 | Alcohol use, unspecified with unspecified alcohol-induced disorder | Diagnosis | ICD-10-CM |
| F11.10 | Opioid abuse, uncomplicated | Diagnosis | ICD-10-CM |
| F11.11 | Opioid abuse, in remission | Diagnosis | ICD-10-CM |
| F11.120 | Opioid abuse with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F11.121 | Opioid abuse with intoxication delirium | Diagnosis | ICD-10-CM |
| F11.122 | Opioid abuse with intoxication with perceptual disturbance | Diagnosis | ICD-10-CM |
| F11.129 | Opioid abuse with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F11.14 | Opioid abuse with opioid-induced mood disorder | Diagnosis | ICD-10-CM |
| F11.150 | Opioid abuse with opioid-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F11.151 | Opioid abuse with opioid-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F11.159 | Opioid abuse with opioid-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F11.181 | Opioid abuse with opioid-induced sexual dysfunction | Diagnosis | ICD-10-CM |
| F11.182 | Opioid abuse with opioid-induced sleep disorder | Diagnosis | ICD-10-CM |
| F11.188 | Opioid abuse with other opioid-induced disorder | Diagnosis | ICD-10-CM |
| F11.19 | Opioid abuse with unspecified opioid-induced disorder | Diagnosis | ICD-10-CM |
| F11.220 | Opioid dependence with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F11.221 | Opioid dependence with intoxication delirium | Diagnosis | ICD-10-CM |
| F11.222 | Opioid dependence with intoxication with perceptual disturbance | Diagnosis | ICD-10-CM |
| F11.229 | Opioid dependence with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F11.23 | Opioid dependence with withdrawal | Diagnosis | ICD-10-CM |
| F11.24 | Opioid dependence with opioid-induced mood disorder | Diagnosis | ICD-10-CM |
| F11.250 | Opioid dependence with opioid-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F11.251 | Opioid dependence with opioid-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F11.259 | Opioid dependence with opioid-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F11.281 | Opioid dependence with opioid-induced sexual dysfunction | Diagnosis | ICD-10-CM |
| F11.282 | Opioid dependence with opioid-induced sleep disorder | Diagnosis | ICD-10-CM |
| F11.288 | Opioid dependence with other opioid-induced disorder | Diagnosis | ICD-10-CM |
| F11.29 | Opioid dependence with unspecified opioid-induced disorder | Diagnosis | ICD-10-CM |
| F11.90 | Opioid use, unspecified, uncomplicated | Diagnosis | ICD-10-CM |
| F11.920 | Opioid use, unspecified with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F11.921 | Opioid use, unspecified with intoxication delirium | Diagnosis | ICD-10-CM |
| F11.922 | Opioid use, unspecified with intoxication with perceptual disturbance | Diagnosis | ICD-10-CM |
| F11.929 | Opioid use, unspecified with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F11.93 | Opioid use, unspecified with withdrawal | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| F11.94 | Opioid use, unspecified with opioid-induced mood disorder | Diagnosis | ICD-10-CM |
| F11.950 | Opioid use, unspecified with opioid-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F11.951 | Opioid use, unspecified with opioid-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F11.959 | Opioid use, unspecified with opioid-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F11.981 | Opioid use, unspecified with opioid-induced sexual dysfunction | Diagnosis | ICD-10-CM |
| F11.982 | Opioid use, unspecified with opioid-induced sleep disorder | Diagnosis | ICD-10-CM |
| F11.988 | Opioid use, unspecified with other opioid-induced disorder | Diagnosis | ICD-10-CM |
| F11.99 | Opioid use, unspecified with unspecified opioid-induced disorder | Diagnosis | ICD-10-CM |
| F12.10 | Cannabis abuse, uncomplicated | Diagnosis | ICD-10-CM |
| F12.11 | Cannabis abuse, in remission | Diagnosis | ICD-10-CM |
| F12.120 | Cannabis abuse with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F12.121 | Cannabis abuse with intoxication delirium | Diagnosis | ICD-10-CM |
| F12.122 | Cannabis abuse with intoxication with perceptual disturbance | Diagnosis | ICD-10-CM |
| F12.129 | Cannabis abuse with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F12.150 | Cannabis abuse with psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F12.151 | Cannabis abuse with psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F12.159 | Cannabis abuse with psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F12.180 | Cannabis abuse with cannabis-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F12.188 | Cannabis abuse with other cannabis-induced disorder | Diagnosis | ICD-10-CM |
| F12.19 | Cannabis abuse with unspecified cannabis-induced disorder | Diagnosis | ICD-10-CM |
| F12.220 | Cannabis dependence with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F12.221 | Cannabis dependence with intoxication delirium | Diagnosis | ICD-10-CM |
| F12.222 | Cannabis dependence with intoxication with perceptual disturbance | Diagnosis | ICD-10-CM |
| F12.229 | Cannabis dependence with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F12.250 | Cannabis dependence with psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F12.251 | Cannabis dependence with psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F12.259 | Cannabis dependence with psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F12.280 | Cannabis dependence with cannabis-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F12.288 | Cannabis dependence with other cannabis-induced disorder | Diagnosis | ICD-10-CM |
| F12.29 | Cannabis dependence with unspecified cannabis-induced disorder | Diagnosis | ICD-10-CM |
| F12.90 | Cannabis use, unspecified, uncomplicated | Diagnosis | ICD-10-CM |
| F12.920 | Cannabis use, unspecified with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F12.921 | Cannabis use, unspecified with intoxication delirium | Diagnosis | ICD-10-CM |
| F12.922 | Cannabis use, unspecified with intoxication with perceptual disturbance | Diagnosis | ICD-10-CM |
| F12.929 | Cannabis use, unspecified with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F12.950 | Cannabis use, unspecified with psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F12.951 | Cannabis use, unspecified with psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F12.959 | Cannabis use, unspecified with psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F12.980 | Cannabis use, unspecified with anxiety disorder | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| F12.988 | Cannabis use, unspecified with other cannabis-induced disorder | Diagnosis | ICD-10-CM |
| F12.99 | Cannabis use, unspecified with unspecified cannabis-induced disorder | Diagnosis | ICD-10-CM |
| F13.10 | Sedative, hypnotic or anxiolytic abuse, uncomplicated | Diagnosis | ICD-10-CM |
| F13.11 | Sedative, hypnotic or anxiolytic abuse, in remission | Diagnosis | ICD-10-CM |
| F13.120 | Sedative, hypnotic or anxiolytic abuse with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F13.121 | Sedative, hypnotic or anxiolytic abuse with intoxication delirium | Diagnosis | ICD-10-CM |
| F13.129 | Sedative, hypnotic or anxiolytic abuse with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F13.14 | Sedative, hypnotic or anxiolytic abuse with sedative, hypnotic or anxiolytic-induced mood disorder | Diagnosis | ICD-10-CM |
| F13.150 | Sedative, hypnotic or anxiolytic abuse with sedative, hypnotic or anxiolytic-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F13.151 | Sedative, hypnotic or anxiolytic abuse with sedative, hypnotic or anxiolytic-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F13.159 | Sedative, hypnotic or anxiolytic abuse with sedative, hypnotic or anxiolytic-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F13.180 | Sedative, hypnotic or anxiolytic abuse with sedative, hypnotic or anxiolytic-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F13.181 | Sedative, hypnotic or anxiolytic abuse with sedative, hypnotic or anxiolytic-induced sexual dysfunction | Diagnosis | ICD-10-CM |
| F13.182 | Sedative, hypnotic or anxiolytic abuse with sedative, hypnotic or anxiolytic-induced sleep disorder | Diagnosis | ICD-10-CM |
| F13.188 | Sedative, hypnotic or anxiolytic abuse with other sedative, hypnotic or anxiolytic-induced disorder | Diagnosis | ICD-10-CM |
| F13.19 | Sedative, hypnotic or anxiolytic abuse with unspecified sedative, hypnotic or anxiolytic-induced disorder | Diagnosis | ICD-10-CM |
| F13.220 | Sedative, hypnotic or anxiolytic dependence with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F13.221 | Sedative, hypnotic or anxiolytic dependence with intoxication delirium | Diagnosis | ICD-10-CM |
| F13.229 | Sedative, hypnotic or anxiolytic dependence with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F13.230 | Sedative, hypnotic or anxiolytic dependence with withdrawal, uncomplicated | Diagnosis | ICD-10-CM |
| F13.231 | Sedative, hypnotic or anxiolytic dependence with withdrawal delirium | Diagnosis | ICD-10-CM |
| F13.232 | Sedative, hypnotic or anxiolytic dependence with withdrawal with perceptual disturbance | Diagnosis | ICD-10-CM |
| F13.239 | Sedative, hypnotic or anxiolytic dependence with withdrawal, unspecified | Diagnosis | ICD-10-CM |
| F13.24 | Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced mood disorder | Diagnosis | ICD-10-CM |
| F13.250 | Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F13.251 | Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| F13.259 | Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F13.26 | Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced persisting amnestic disorder | Diagnosis | ICD-10-CM |
| F13.27 | Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced persisting dementia | Diagnosis | ICD-10-CM |
| F13.280 | Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F13.281 | Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced sexual dysfunction | Diagnosis | ICD-10-CM |
| F13.282 | Sedative, hypnotic or anxiolytic dependence with sedative, hypnotic or anxiolytic-induced sleep disorder | Diagnosis | ICD-10-CM |
| F13.288 | Sedative, hypnotic or anxiolytic dependence with other sedative, hypnotic or anxiolytic-induced disorder | Diagnosis | ICD-10-CM |
| F13.29 | Sedative, hypnotic or anxiolytic dependence with unspecified sedative, hypnotic or anxiolytic-induced disorder | Diagnosis | ICD-10-CM |
| F13.90 | Sedative, hypnotic, or anxiolytic use, unspecified, uncomplicated | Diagnosis | ICD-10-CM |
| F13.920 | Sedative, hypnotic or anxiolytic use, unspecified with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F13.921 | Sedative, hypnotic or anxiolytic use, unspecified with intoxication delirium | Diagnosis | ICD-10-CM |
| F13.929 | Sedative, hypnotic or anxiolytic use, unspecified with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F13.930 | Sedative, hypnotic or anxiolytic use, unspecified with withdrawal, uncomplicated | Diagnosis | ICD-10-CM |
| F13.931 | Sedative, hypnotic or anxiolytic use, unspecified with withdrawal delirium | Diagnosis | ICD-10-CM |
| F13.932 | Sedative, hypnotic or anxiolytic use, unspecified with withdrawal with perceptual | Diagnosis | ICD-10-CM |
| F13.939 | Sedative, hypnotic or anxiolytic use, unspecified with withdrawal, unspecified | Diagnosis | ICD-10-CM |
| F13.94 | Sedative, hypnotic or anxiolytic use, unspecified with sedative, hypnotic or anxiolytic-induced mood disorder | Diagnosis | ICD-10-CM |
| F13.950 | Sedative, hypnotic or anxiolytic use, unspecified with sedative, hypnotic or anxiolytic-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F13.951 | Sedative, hypnotic or anxiolytic use, unspecified with sedative, hypnotic or anxiolytic-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F13.959 | Sedative, hypnotic or anxiolytic use, unspecified with sedative, hypnotic or anxiolytic-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F13.96 | Sedative, hypnotic or anxiolytic use, unspecified with sedative, hypnotic or anxiolytic-induced persisting amnestic disorder | Diagnosis | ICD-10-CM |
| F13.97 | Sedative, hypnotic or anxiolytic use, unspecified with sedative, hypnotic or anxiolytic-induced persisting dementia | Diagnosis | ICD-10-CM |
| F13.980 | Sedative, hypnotic or anxiolytic use, unspecified with sedative, hypnotic or anxiolytic-induced anxiety disorder | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| F13.981 | Sedative, hypnotic or anxiolytic use, unspecified with sedative, hypnotic or anxiolytic-induced sexual dysfunction | Diagnosis | ICD-10-CM |
| F13.982 | Sedative, hypnotic or anxiolytic use, unspecified with sedative, hypnotic or anxiolytic-induced sleep disorder | Diagnosis | ICD-10-CM |
| F13.988 | Sedative, hypnotic or anxiolytic use, unspecified with other sedative, hypnotic or anxiolytic-induced disorder | Diagnosis | ICD-10-CM |
| F13.99 | Sedative, hypnotic or anxiolytic use, unspecified with unspecified sedative, hypnotic or anxiolytic-induced disorder | Diagnosis | ICD-10-CM |
| F14.10 | Cocaine abuse, uncomplicated | Diagnosis | ICD-10-CM |
| F14.11 | Cocaine abuse, in remission | Diagnosis | ICD-10-CM |
| F14.120 | Cocaine abuse with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F14.121 | Cocaine abuse with intoxication with delirium | Diagnosis | ICD-10-CM |
| F14.122 | Cocaine abuse with intoxication with perceptual disturbance | Diagnosis | ICD-10-CM |
| F14.129 | Cocaine abuse with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F14.14 | Cocaine abuse with cocaine-induced mood disorder | Diagnosis | ICD-10-CM |
| F14.150 | Cocaine abuse with cocaine-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F14.151 | Cocaine abuse with cocaine-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F14.159 | Cocaine abuse with cocaine-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F14.180 | Cocaine abuse with cocaine-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F14.181 | Cocaine abuse with cocaine-induced sexual dysfunction | Diagnosis | ICD-10-CM |
| F14.182 | Cocaine abuse with cocaine-induced sleep disorder | Diagnosis | ICD-10-CM |
| F14.188 | Cocaine abuse with other cocaine-induced disorder | Diagnosis | ICD-10-CM |
| F14.19 | Cocaine abuse with unspecified cocaine-induced disorder | Diagnosis | ICD-10-CM |
| F14.220 | Cocaine dependence with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F14.221 | Cocaine dependence with intoxication delirium | Diagnosis | ICD-10-CM |
| F14.222 | Cocaine dependence with intoxication with perceptual disturbance | Diagnosis | ICD-10-CM |
| F14.229 | Cocaine dependence with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F14.23 | Cocaine dependence with withdrawal | Diagnosis | ICD-10-CM |
| F14.24 | Cocaine dependence with cocaine-induced mood disorder | Diagnosis | ICD-10-CM |
| F14.250 | Cocaine dependence with cocaine-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F14.251 | Cocaine dependence with cocaine-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F14.259 | Cocaine dependence with cocaine-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F14.280 | Cocaine dependence with cocaine-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F14.281 | Cocaine dependence with cocaine-induced sexual dysfunction | Diagnosis | ICD-10-CM |
| F14.282 | Cocaine dependence with cocaine-induced sleep disorder | Diagnosis | ICD-10-CM |
| F14.288 | Cocaine dependence with other cocaine-induced disorder | Diagnosis | ICD-10-CM |
| F14.29 | Cocaine dependence with unspecified cocaine-induced disorder | Diagnosis | ICD-10-CM |
| F14.90 | Cocaine use, unspecified, uncomplicated | Diagnosis | ICD-10-CM |
| F14.920 | Cocaine use, unspecified with intoxication, uncomplicated | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| F14.921 | Cocaine use, unspecified with intoxication delirium | Diagnosis | ICD-10-CM |
| F14.922 | Cocaine use, unspecified with intoxication with perceptual disturbance | Diagnosis | ICD-10-CM |
| F14.929 | Cocaine use, unspecified with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F14.94 | Cocaine use, unspecified with cocaine-induced mood disorder | Diagnosis | ICD-10-CM |
| F14.950 | Cocaine use, unspecified with cocaine-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F14.951 | Cocaine use, unspecified with cocaine-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F14.959 | Cocaine use, unspecified with cocaine-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F14.980 | Cocaine use, unspecified with cocaine-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F14.981 | Cocaine use, unspecified with cocaine-induced sexual dysfunction | Diagnosis | ICD-10-CM |
| F14.982 | Cocaine use, unspecified with cocaine-induced sleep disorder | Diagnosis | ICD-10-CM |
| F14.988 | Cocaine use, unspecified with other cocaine-induced disorder | Diagnosis | ICD-10-CM |
| F14.99 | Cocaine use, unspecified with unspecified cocaine-induced disorder | Diagnosis | ICD-10-CM |
| F15.10 | Other stimulant abuse, uncomplicated | Diagnosis | ICD-10-CM |
| F15.11 | Other stimulant abuse, in remission | Diagnosis | ICD-10-CM |
| F15.120 | Other stimulant abuse with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F15.121 | Other stimulant abuse with intoxication delirium | Diagnosis | ICD-10-CM |
| F15.122 | Other stimulant abuse with intoxication with perceptual disturbance | Diagnosis | ICD-10-CM |
| F15.129 | Other stimulant abuse with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F15.14 | Other stimulant abuse with stimulant-induced mood disorder | Diagnosis | ICD-10-CM |
| F15.150 | Other stimulant abuse with stimulant-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F15.151 | Other stimulant abuse with stimulant-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F15.159 | Other stimulant abuse with stimulant-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F15.180 | Other stimulant abuse with stimulant-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F15.181 | Other stimulant abuse with stimulant-induced sexual dysfunction | Diagnosis | ICD-10-CM |
| F15.182 | Other stimulant abuse with stimulant-induced sleep disorder | Diagnosis | ICD-10-CM |
| F15.188 | Other stimulant abuse with other stimulant-induced disorder | Diagnosis | ICD-10-CM |
| F15.19 | Other stimulant abuse with unspecified stimulant-induced disorder | Diagnosis | ICD-10-CM |
| F15.220 | Other stimulant dependence with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F15.221 | Other stimulant dependence with intoxication delirium | Diagnosis | ICD-10-CM |
| F15.222 | Other stimulant dependence with intoxication with perceptual disturbance | Diagnosis | ICD-10-CM |
| F15.229 | Other stimulant dependence with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F15.23 | Other stimulant dependence with withdrawal | Diagnosis | ICD-10-CM |
| F15.24 | Other stimulant dependence with stimulant-induced mood disorder | Diagnosis | ICD-10-CM |
| F15.250 | Other stimulant dependence with stimulant-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F15.251 | Other stimulant dependence with stimulant-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F15.259 | Other stimulant dependence with stimulant-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F15.280 | Other stimulant dependence with stimulant-induced anxiety disorder | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| F15.281 | Other stimulant dependence with stimulant-induced sexual dysfunction | Diagnosis | ICD-10-CM |
| F15.282 | Other stimulant dependence with stimulant-induced sleep disorder | Diagnosis | ICD-10-CM |
| F15.288 | Other stimulant dependence with other stimulant-induced disorder | Diagnosis | ICD-10-CM |
| F15.29 | Other stimulant dependence with unspecified stimulant-induced disorder | Diagnosis | ICD-10-CM |
| F15.90 | Other stimulant use, unspecified, uncomplicated | Diagnosis | ICD-10-CM |
| F15.920 | Other stimulant use, unspecified with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F15.921 | Other stimulant use, unspecified with intoxication delirium | Diagnosis | ICD-10-CM |
| F15.922 | Other stimulant use, unspecified with intoxication with perceptual disturbance | Diagnosis | ICD-10-CM |
| F15.929 | Other stimulant use, unspecified with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F15.93 | Other stimulant use, unspecified with withdrawal | Diagnosis | ICD-10-CM |
| F15.94 | Other stimulant use, unspecified with stimulant-induced mood disorder | Diagnosis | ICD-10-CM |
| F15.950 | Other stimulant use, unspecified with stimulant-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F15.951 | Other stimulant use, unspecified with stimulant-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F15.959 | Other stimulant use, unspecified with stimulant-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F15.980 | Other stimulant use, unspecified with stimulant-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F15.981 | Other stimulant use, unspecified with stimulant-induced sexual dysfunction | Diagnosis | ICD-10-CM |
| F15.982 | Other stimulant use, unspecified with stimulant-induced sleep disorder | Diagnosis | ICD-10-CM |
| F15.988 | Other stimulant use, unspecified with other stimulant-induced disorder | Diagnosis | ICD-10-CM |
| F15.99 | Other stimulant use, unspecified with unspecified stimulant-induced disorder | Diagnosis | ICD-10-CM |
| F16.10 | Hallucinogen abuse, uncomplicated | Diagnosis | ICD-10-CM |
| F16.11 | Hallucinogen abuse, in remission | Diagnosis | ICD-10-CM |
| F16.120 | Hallucinogen abuse with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F16.121 | Hallucinogen abuse with intoxication with delirium | Diagnosis | ICD-10-CM |
| F16.122 | Hallucinogen abuse with intoxication with perceptual disturbance | Diagnosis | ICD-10-CM |
| F16.129 | Hallucinogen abuse with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F16.14 | Hallucinogen abuse with hallucinogen-induced mood disorder | Diagnosis | ICD-10-CM |
| F16.150 | Hallucinogen abuse with hallucinogen-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F16.151 | Hallucinogen abuse with hallucinogen-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F16.159 | Hallucinogen abuse with hallucinogen-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F16.180 | Hallucinogen abuse with hallucinogen-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F16.183 | Hallucinogen abuse with hallucinogen persisting perception disorder (flashbacks) | Diagnosis | ICD-10-CM |
| F16.188 | Hallucinogen abuse with other hallucinogen-induced disorder | Diagnosis | ICD-10-CM |
| F16.19 | Hallucinogen abuse with unspecified hallucinogen-induced disorder | Diagnosis | ICD-10-CM |
| F16.220 | Hallucinogen dependence with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F16.221 | Hallucinogen dependence with intoxication with delirium | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| F16.229 | Hallucinogen dependence with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F16.24 | Hallucinogen dependence with hallucinogen-induced mood disorder | Diagnosis | ICD-10-CM |
| F16.250 | Hallucinogen dependence with hallucinogen-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F16.251 | Hallucinogen dependence with hallucinogen-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F16.259 | Hallucinogen dependence with hallucinogen-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F16.280 | Hallucinogen dependence with hallucinogen-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F16.283 | Hallucinogen dependence with hallucinogen persisting perception disorder | Diagnosis | ICD-10-CM |
| F16.288 | Hallucinogen dependence with other hallucinogen-induced disorder | Diagnosis | ICD-10-CM |
| F16.29 | Hallucinogen dependence with unspecified hallucinogen-induced disorder | Diagnosis | ICD-10-CM |
| F16.90 | Hallucinogen use, unspecified, uncomplicated | Diagnosis | ICD-10-CM |
| F16.920 | Hallucinogen use, unspecified with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F16.921 | Hallucinogen use, unspecified with intoxication with delirium | Diagnosis | ICD-10-CM |
| F16.929 | Hallucinogen use, unspecified with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F16.94 | Hallucinogen use, unspecified with hallucinogen-induced mood disorder | Diagnosis | ICD-10-CM |
| F16.950 | Hallucinogen use, unspecified with hallucinogen-induced psychotic disorder with | Diagnosis | ICD-10-CM |
| F16.951 | Hallucinogen use, unspecified with hallucinogen-induced psychotic disorder with | Diagnosis | ICD-10-CM |
| F16.959 | Hallucinogen use, unspecified with hallucinogen-induced psychotic disorder, | Diagnosis | ICD-10-CM |
| F16.980 | Hallucinogen use, unspecified with hallucinogen-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F16.983 | Hallucinogen use, unspecified with hallucinogen persisting perception disorder | Diagnosis | ICD-10-CM |
| F16.988 | Hallucinogen use, unspecified with other hallucinogen-induced disorder | Diagnosis | ICD-10-CM |
| F16.99 | Hallucinogen use, unspecified with unspecified hallucinogen-induced disorder | Diagnosis | ICD-10-CM |
| F17.203 | Nicotine dependence unspecified, with withdrawal | Diagnosis | ICD-10-CM |
| F17.208 | Nicotine dependence, unspecified, with other nicotine-induced disorders | Diagnosis | ICD-10-CM |
| F17.209 | Nicotine dependence, unspecified, with unspecified nicotine-induced disorders | Diagnosis | ICD-10-CM |
| F17.213 | Nicotine dependence, cigarettes, with withdrawal | Diagnosis | ICD-10-CM |
| F17.218 | Nicotine dependence, cigarettes, with other nicotine-induced disorders | Diagnosis | ICD-10-CM |
| F17.219 | Nicotine dependence, cigarettes, with unspecified nicotine-induced disorders | Diagnosis | ICD-10-CM |
| F17.223 | Nicotine dependence, chewing tobacco, with withdrawal | Diagnosis | ICD-10-CM |
| F17.228 | Nicotine dependence, chewing tobacco, with other nicotine-induced disorders | Diagnosis | ICD-10-CM |
| F17.229 | Nicotine dependence, chewing tobacco, with unspecified nicotine-induced disorders | Diagnosis | ICD-10-CM |
| F17.293 | Nicotine dependence, other tobacco product, with withdrawal | Diagnosis | ICD-10-CM |
| F17.298 | Nicotine dependence, other tobacco product, with other nicotine-induced disorders | Diagnosis | ICD-10-CM |
| F17.299 | Nicotine dependence, other tobacco product, with unspecified nicotine-induced disorders | Diagnosis | ICD-10-CM |
| F18.10 | Inhalant abuse, uncomplicated | Diagnosis | ICD-10-CM |
| F18.11 | Inhalant abuse, in remission | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| F18.120 | Inhalant abuse with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F18.121 | Inhalant abuse with intoxication delirium | Diagnosis | ICD-10-CM |
| F18.129 | Inhalant abuse with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F18.14 | Inhalant abuse with inhalant-induced mood disorder | Diagnosis | ICD-10-CM |
| F18.150 | Inhalant abuse with inhalant-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F18.151 | Inhalant abuse with inhalant-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F18.159 | Inhalant abuse with inhalant-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F18.17 | Inhalant abuse with inhalant-induced dementia | Diagnosis | ICD-10-CM |
| F18.180 | Inhalant abuse with inhalant-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F18.188 | Inhalant abuse with other inhalant-induced disorder | Diagnosis | ICD-10-CM |
| F18.19 | Inhalant abuse with unspecified inhalant-induced disorder | Diagnosis | ICD-10-CM |
| F18.220 | Inhalant dependence with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F18.221 | Inhalant dependence with intoxication delirium | Diagnosis | ICD-10-CM |
| F18.229 | Inhalant dependence with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F18.24 | Inhalant dependence with inhalant-induced mood disorder | Diagnosis | ICD-10-CM |
| F18.250 | Inhalant dependence with inhalant-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F18.251 | Inhalant dependence with inhalant-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F18.259 | Inhalant dependence with inhalant-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F18.27 | Inhalant dependence with inhalant-induced dementia | Diagnosis | ICD-10-CM |
| F18.280 | Inhalant dependence with inhalant-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F18.288 | Inhalant dependence with other inhalant-induced disorder | Diagnosis | ICD-10-CM |
| F18.29 | Inhalant dependence with unspecified inhalant-induced disorder | Diagnosis | ICD-10-CM |
| F18.90 | Inhalant use, unspecified, uncomplicated | Diagnosis | ICD-10-CM |
| F18.920 | Inhalant use, unspecified with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F18.921 | Inhalant use, unspecified with intoxication with delirium | Diagnosis | ICD-10-CM |
| F18.929 | Inhalant use, unspecified with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F18.94 | Inhalant use, unspecified with inhalant-induced mood disorder | Diagnosis | ICD-10-CM |
| F18.950 | Inhalant use, unspecified with inhalant-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F18.951 | Inhalant use, unspecified with inhalant-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F18.959 | Inhalant use, unspecified with inhalant-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F18.97 | Inhalant use, unspecified with inhalant-induced persisting dementia | Diagnosis | ICD-10-CM |
| F18.980 | Inhalant use, unspecified with inhalant-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F18.988 | Inhalant use, unspecified with other inhalant-induced disorder | Diagnosis | ICD-10-CM |
| F18.99 | Inhalant use, unspecified with unspecified inhalant-induced disorder | Diagnosis | ICD-10-CM |
| F19.10 | Other psychoactive substance abuse, uncomplicated | Diagnosis | ICD-10-CM |
| F19.11 | Other psychoactive substance abuse, in remission | Diagnosis | ICD-10-CM |
| F19.120 | Other psychoactive substance abuse with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F19.121 | Other psychoactive substance abuse with intoxication delirium | Diagnosis | ICD-10-CM |
| F19.122 | Other psychoactive substance abuse with intoxication with perceptual disturbances | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| F19.129 | Other psychoactive substance abuse with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F19.14 | Other psychoactive substance abuse with psychoactive substance-induced mood disorder | Diagnosis | ICD-10-CM |
| F19.150 | Other psychoactive substance abuse with psychoactive substance-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F19.151 | Other psychoactive substance abuse with psychoactive substance-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F19.159 | Other psychoactive substance abuse with psychoactive substance-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F19.16 | Other psychoactive substance abuse with psychoactive substance-induced persisting amnesic disorder | Diagnosis | ICD-10-CM |
| F19.17 | Other psychoactive substance abuse with psychoactive substance-induced persisting dementia | Diagnosis | ICD-10-CM |
| F19.180 | Other psychoactive substance abuse with psychoactive substance-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F19.181 | Other psychoactive substance abuse with psychoactive substance-induced sexual dysfunction | Diagnosis | ICD-10-CM |
| F19.182 | Other psychoactive substance abuse with psychoactive substance-induced sleep disorder | Diagnosis | ICD-10-CM |
| F19.188 | Other psychoactive substance abuse with other psychoactive substance-induced disorder | Diagnosis | ICD-10-CM |
| F19.19 | Other psychoactive substance abuse with unspecified psychoactive substance-induced disorder | Diagnosis | ICD-10-CM |
| F19.21 | Other psychoactive substance dependence, in remission | Diagnosis | ICD-10-CM |
| F19.220 | Other psychoactive substance dependence with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F19.221 | Other psychoactive substance dependence with intoxication delirium | Diagnosis | ICD-10-CM |
| F19.222 | Other psychoactive substance dependence with intoxication with perceptual changes | Diagnosis | ICD-10-CM |
| F19.229 | Other psychoactive substance dependence with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F19.230 | Other psychoactive substance dependence with withdrawal, uncomplicated | Diagnosis | ICD-10-CM |
| F19.231 | Other psychoactive substance dependence with withdrawal delirium | Diagnosis | ICD-10-CM |
| F19.232 | Other psychoactive substance dependence with withdrawal with perceptual changes | Diagnosis | ICD-10-CM |
| F19.239 | Other psychoactive substance dependence with withdrawal, unspecified | Diagnosis | ICD-10-CM |
| F19.24 | Other psychoactive substance dependence with psychoactive substance-induced mood disorder | Diagnosis | ICD-10-CM |
| F19.250 | Other psychoactive substance dependence with psychoactive substance-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F19.251 | Other psychoactive substance dependence with psychoactive substance-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| F19.259 | Other psychoactive substance dependence with psychoactive substance-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F19.26 | Other psychoactive substance dependence with psychoactive substance-induced persisting amnesic disorder | Diagnosis | ICD-10-CM |
| F19.27 | Other psychoactive substance dependence with psychoactive substance-induced persisting dementia | Diagnosis | ICD-10-CM |
| F19.280 | Other psychoactive substance dependence with psychoactive substance-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F19.281 | Other psychoactive substance dependence with psychoactive substance-induced sexual dysfunction | Diagnosis | ICD-10-CM |
| F19.282 | Other psychoactive substance dependence with psychoactive substance-induced sleep disorder | Diagnosis | ICD-10-CM |
| F19.288 | Other psychoactive substance dependence with other psychoactive substance-induced disorder | Diagnosis | ICD-10-CM |
| F19.29 | Other psychoactive substance dependence with unspecified psychoactive substance-induced disorder | Diagnosis | ICD-10-CM |
| F19.90 | Other psychoactive substance use, unspecified, uncomplicated | Diagnosis | ICD-10-CM |
| F19.920 | Other psychoactive substance use, unspecified with intoxication, uncomplicated | Diagnosis | ICD-10-CM |
| F19.921 | Other psychoactive substance use, unspecified with intoxication with delirium | Diagnosis | ICD-10-CM |
| F19.922 | Other psychoactive substance use, unspecified with intoxication with perceptual disturbance | Diagnosis | ICD-10-CM |
| F19.929 | Other psychoactive substance use, unspecified with intoxication, unspecified | Diagnosis | ICD-10-CM |
| F19.930 | Other psychoactive substance use, unspecified with withdrawal, uncomplicated | Diagnosis | ICD-10-CM |
| F19.931 | Other psychoactive substance use, unspecified with withdrawal delirium | Diagnosis | ICD-10-CM |
| F19.932 | Other psychoactive substance use, unspecified with withdrawal with perceptual | Diagnosis | ICD-10-CM |
| F19.939 | Other psychoactive substance use, unspecified with withdrawal, unspecified | Diagnosis | ICD-10-CM |
| F19.94 | Other psychoactive substance use, unspecified with psychoactive substance-induced mood disorder | Diagnosis | ICD-10-CM |
| F19.950 | Other psychoactive substance use, unspecified with psychoactive substance-induced psychotic disorder with delusions | Diagnosis | ICD-10-CM |
| F19.951 | Other psychoactive substance use, unspecified with psychoactive substance-induced psychotic disorder with hallucinations | Diagnosis | ICD-10-CM |
| F19.959 | Other psychoactive substance use, unspecified with psychoactive substance-induced psychotic disorder, unspecified | Diagnosis | ICD-10-CM |
| F19.96 | Other psychoactive substance use, unspecified with psychoactive substance-induced persisting amnesic disorder | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| F19.97 | Other psychoactive substance use, unspecified with psychoactive substance-induced persisting dementia | Diagnosis | ICD-10-CM |
| F19.980 | Other psychoactive substance use, unspecified with psychoactive substance-induced anxiety disorder | Diagnosis | ICD-10-CM |
| F19.981 | Other psychoactive substance use, unspecified with psychoactive substance-induced sexual dysfunction | Diagnosis | ICD-10-CM |
| F19.982 | Other psychoactive substance use, unspecified with psychoactive substance-induced sleep disorder | Diagnosis | ICD-10-CM |
| F19.988 | Other psychoactive substance use, unspecified with other psychoactive substance-induced disorder | Diagnosis | ICD-10-CM |
| F19.99 | Other psychoactive substance use, unspecified with unspecified psychoactive substance-induced disorder | Diagnosis | ICD-10-CM |
| F55.0 | Abuse of antacids | Diagnosis | ICD-10-CM |
| F55.1 | Abuse of herbal or folk remedies | Diagnosis | ICD-10-CM |
| F55.2 | Abuse of laxatives | Diagnosis | ICD-10-CM |
| F55.3 | Abuse of steroids or hormones | Diagnosis | ICD-10-CM |
| F55.4 | Abuse of vitamins | Diagnosis | ICD-10-CM |
| F55.8 | Abuse of other non-psychoactive substances | Diagnosis | ICD-10-CM |
| G62.1 | Alcoholic polyneuropathy | Diagnosis | ICD-10-CM |
| HZ2ZZZZ | Detoxification Services for Substance Abuse Treatment | Procedure | ICD-10-PCS |
| HZ30ZZZ | Individual Counseling for Substance Abuse Treatment, Cognitive | Procedure | ICD-10-PCS |
| HZ31ZZZ | Individual Counseling for Substance Abuse Treatment, Behavioral | Procedure | ICD-10-PCS |
| HZ32ZZZ | Individual Counseling for Substance Abuse Treatment, Cognitive-Behavioral | Procedure | ICD-10-PCS |
| HZ33ZZZ | Individual Counseling for Substance Abuse Treatment, 12-Step | Procedure | ICD-10-PCS |
| HZ34ZZZ | Individual Counseling for Substance Abuse Treatment, Interpersonal | Procedure | ICD-10-PCS |
| HZ35ZZZ | Individual Counseling for Substance Abuse Treatment, Vocational | Procedure | ICD-10-PCS |
| HZ36ZZZ | Individual Counseling for Substance Abuse Treatment, Psychoeducation | Procedure | ICD-10-PCS |
| HZ37ZZZ | Individual Counseling for Substance Abuse Treatment, Motivational Enhancement | Procedure | ICD-10-PCS |
| HZ38ZZZ | Individual Counseling for Substance Abuse Treatment, Confrontational | Procedure | ICD-10-PCS |
| HZ39ZZZ | Individual Counseling for Substance Abuse Treatment, Continuing Care | Procedure | ICD-10-PCS |
| HZ3BZZZ | Individual Counseling for Substance Abuse Treatment, Spiritual | Procedure | ICD-10-PCS |
| HZ40ZZZ | Group Counseling for Substance Abuse Treatment, Cognitive | Procedure | ICD-10-PCS |
| HZ41ZZZ | Group Counseling for Substance Abuse Treatment, Behavioral | Procedure | ICD-10-PCS |
| HZ42ZZZ | Group Counseling for Substance Abuse Treatment, Cognitive-Behavioral | Procedure | ICD-10-PCS |
| HZ43ZZZ | Group Counseling for Substance Abuse Treatment, 12-Step | Procedure | ICD-10-PCS |
| HZ44ZZZ | Group Counseling for Substance Abuse Treatment, Interpersonal | Procedure | ICD-10-PCS |
| HZ45ZZZ | Group Counseling for Substance Abuse Treatment, Vocational | Procedure | ICD-10-PCS |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|------------|
| HZ46ZZZ | Group Counseling for Substance Abuse Treatment, Psychoeducation | Procedure | ICD-10-PCS |
| HZ47ZZZ | Group Counseling for Substance Abuse Treatment, Motivational Enhancement | Procedure | ICD-10-PCS |
| HZ48ZZZ | Group Counseling for Substance Abuse Treatment, Confrontational | Procedure | ICD-10-PCS |
| HZ49ZZZ | Group Counseling for Substance Abuse Treatment, Continuing Care | Procedure | ICD-10-PCS |
| HZ4BZZZ | Group Counseling for Substance Abuse Treatment, Spiritual | Procedure | ICD-10-PCS |
| HZ50ZZZ | Individual Psychotherapy for Substance Abuse Treatment, Cognitive | Procedure | ICD-10-PCS |
| HZ51ZZZ | Individual Psychotherapy for Substance Abuse Treatment, Behavioral | Procedure | ICD-10-PCS |
| HZ52ZZZ | Individual Psychotherapy for Substance Abuse Treatment, Cognitive-Behavioral | Procedure | ICD-10-PCS |
| HZ53ZZZ | Individual Psychotherapy for Substance Abuse Treatment, 12-Step | Procedure | ICD-10-PCS |
| HZ54ZZZ | Individual Psychotherapy for Substance Abuse Treatment, Interpersonal | Procedure | ICD-10-PCS |
| HZ55ZZZ | Individual Psychotherapy for Substance Abuse Treatment, Interactive | Procedure | ICD-10-PCS |
| HZ56ZZZ | Individual Psychotherapy for Substance Abuse Treatment, Psychoeducation | Procedure | ICD-10-PCS |
| HZ57ZZZ | Individual Psychotherapy for Substance Abuse Treatment, Motivational Enhancement | Procedure | ICD-10-PCS |
| HZ58ZZZ | Individual Psychotherapy for Substance Abuse Treatment, Confrontational | Procedure | ICD-10-PCS |
| HZ59ZZZ | Individual Psychotherapy for Substance Abuse Treatment, Supportive | Procedure | ICD-10-PCS |
| HZ5BZZZ | Individual Psychotherapy for Substance Abuse Treatment, Psychoanalysis | Procedure | ICD-10-PCS |
| HZ5CZZZ | Individual Psychotherapy for Substance Abuse Treatment, Psychodynamic | Procedure | ICD-10-PCS |
| HZ5DZZZ | Individual Psychotherapy for Substance Abuse Treatment, Psychophysiological | Procedure | ICD-10-PCS |
| HZ63ZZZ | Family Counseling for Substance Abuse Treatment | Procedure | ICD-10-PCS |
| HZ83ZZZ | Medication Management for Substance Abuse Treatment, Antabuse | Procedure | ICD-10-PCS |
| HZ86ZZZ | Medication Management for Substance Abuse Treatment, Clonidine | Procedure | ICD-10-PCS |
| HZ88ZZZ | Medication Management for Substance Abuse Treatment, Psychiatric Medication | Procedure | ICD-10-PCS |
| HZ89ZZZ | Medication Management for Substance Abuse Treatment, Other Replacement | Procedure | ICD-10-PCS |
| HZ93ZZZ | Pharmacotherapy for Substance Abuse Treatment, Antabuse | Procedure | ICD-10-PCS |
| HZ96ZZZ | Pharmacotherapy for Substance Abuse Treatment, Clonidine | Procedure | ICD-10-PCS |
| HZ98ZZZ | Pharmacotherapy for Substance Abuse Treatment, Psychiatric Medication | Procedure | ICD-10-PCS |
| HZ99ZZZ | Pharmacotherapy for Substance Abuse Treatment, Other Replacement Medication | Procedure | ICD-10-PCS |
| I42.6 | Alcoholic cardiomyopathy | Diagnosis | ICD-10-CM |
| K29.2 | Alcoholic gastritis | Diagnosis | ICD-10-CM |
| K29.20 | Alcoholic gastritis without bleeding | Diagnosis | ICD-10-CM |
| K29.21 | Alcoholic gastritis with bleeding | Diagnosis | ICD-10-CM |
| K70.0 | Alcoholic fatty liver | Diagnosis | ICD-10-CM |
| K70.10 | Alcoholic hepatitis without ascites | Diagnosis | ICD-10-CM |
| K70.11 | Alcoholic hepatitis with ascites | Diagnosis | ICD-10-CM |
| K70.2 | Alcoholic fibrosis and sclerosis of liver | Diagnosis | ICD-10-CM |
| K70.3 | Alcoholic cirrhosis of liver | Diagnosis | ICD-10-CM |
| K70.30 | Alcoholic cirrhosis of liver without ascites | Diagnosis | ICD-10-CM |
| K70.31 | Alcoholic cirrhosis of liver with ascites | Diagnosis | ICD-10-CM |
| K70.40 | Alcoholic hepatic failure without coma | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|----------|--|---------------|-----------|
| K70.41 | Alcoholic hepatic failure with coma | Diagnosis | ICD-10-CM |
| K70.9 | Alcoholic liver disease, unspecified | Diagnosis | ICD-10-CM |
| O99.320 | Drug use complicating pregnancy, unspecified trimester | Diagnosis | ICD-10-CM |
| O99.321 | Drug use complicating pregnancy, first trimester | Diagnosis | ICD-10-CM |
| O99.322 | Drug use complicating pregnancy, second trimester | Diagnosis | ICD-10-CM |
| O99.323 | Drug use complicating pregnancy, third trimester | Diagnosis | ICD-10-CM |
| O99.324 | Drug use complicating childbirth | Diagnosis | ICD-10-CM |
| O99.325 | Drug use complicating the puerperium | Diagnosis | ICD-10-CM |
| R78.0 | Finding of alcohol in blood | Diagnosis | ICD-10-CM |
| T51 | Toxic effect of alcohol | Diagnosis | ICD-10-CM |
| T51.0 | Toxic effect of ethanol | Diagnosis | ICD-10-CM |
| T51.0X | Toxic effect of ethanol | Diagnosis | ICD-10-CM |
| T51.0X1 | Toxic effect of ethanol, accidental (unintentional) | Diagnosis | ICD-10-CM |
| T51.0X1A | Toxic effect of ethanol, accidental (unintentional), initial encounter | Diagnosis | ICD-10-CM |
| T51.0X1D | Toxic effect of ethanol, accidental (unintentional), subsequent encounter | Diagnosis | ICD-10-CM |
| T51.0X1S | Toxic effect of ethanol, accidental (unintentional), sequela | Diagnosis | ICD-10-CM |
| T51.0X2 | Toxic effect of ethanol, intentional self-harm | Diagnosis | ICD-10-CM |
| T51.0X2A | Toxic effect of ethanol, intentional self-harm, initial encounter | Diagnosis | ICD-10-CM |
| T51.0X2D | Toxic effect of ethanol, intentional self-harm, subsequent encounter | Diagnosis | ICD-10-CM |
| T51.0X2S | Toxic effect of ethanol, intentional self-harm, sequela | Diagnosis | ICD-10-CM |
| T51.0X3 | Toxic effect of ethanol, assault | Diagnosis | ICD-10-CM |
| T51.0X3A | Toxic effect of ethanol, assault, initial encounter | Diagnosis | ICD-10-CM |
| T51.0X3D | Toxic effect of ethanol, assault, subsequent encounter | Diagnosis | ICD-10-CM |
| T51.0X3S | Toxic effect of ethanol, assault, sequela | Diagnosis | ICD-10-CM |
| T51.0X4 | Toxic effect of ethanol, undetermined | Diagnosis | ICD-10-CM |
| T51.0X4A | Toxic effect of ethanol, undetermined, initial encounter | Diagnosis | ICD-10-CM |
| T51.0X4D | Toxic effect of ethanol, undetermined, subsequent encounter | Diagnosis | ICD-10-CM |
| T51.0X4S | Toxic effect of ethanol, undetermined, sequela | Diagnosis | ICD-10-CM |
| T51.8 | Toxic effect of other alcohols | Diagnosis | ICD-10-CM |
| T51.8X | Toxic effect of other alcohols | Diagnosis | ICD-10-CM |
| T51.8X1 | Toxic effect of other alcohols, accidental (unintentional) | Diagnosis | ICD-10-CM |
| T51.8X1A | Toxic effect of other alcohols, accidental (unintentional), initial encounter | Diagnosis | ICD-10-CM |
| T51.8X1D | Toxic effect of other alcohols, accidental (unintentional), subsequent encounter | Diagnosis | ICD-10-CM |
| T51.8X1S | Toxic effect of other alcohols, accidental (unintentional), sequela | Diagnosis | ICD-10-CM |
| T51.8X2 | Toxic effect of other alcohols, intentional self-harm | Diagnosis | ICD-10-CM |
| T51.8X2A | Toxic effect of other alcohols, intentional self-harm, initial encounter | Diagnosis | ICD-10-CM |
| T51.8X2D | Toxic effect of other alcohols, intentional self-harm, subsequent encounter | Diagnosis | ICD-10-CM |
| T51.8X2S | Toxic effect of other alcohols, intentional self-harm, sequela | Diagnosis | ICD-10-CM |
| T51.8X3 | Toxic effect of other alcohols, assault | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------------------|---|---------------|-----------|
| T51.8X3A | Toxic effect of other alcohols, assault, initial encounter | Diagnosis | ICD-10-CM |
| T51.8X3D | Toxic effect of other alcohols, assault, subsequent encounter | Diagnosis | ICD-10-CM |
| T51.8X3S | Toxic effect of other alcohols, assault, sequela | Diagnosis | ICD-10-CM |
| T51.8X4 | Toxic effect of other alcohols, undetermined | Diagnosis | ICD-10-CM |
| T51.8X4A | Toxic effect of other alcohols, undetermined, initial encounter | Diagnosis | ICD-10-CM |
| T51.8X4D | Toxic effect of other alcohols, undetermined, subsequent encounter | Diagnosis | ICD-10-CM |
| T51.8X4S | Toxic effect of other alcohols, undetermined, sequela | Diagnosis | ICD-10-CM |
| T51.9 | Toxic effect of unspecified alcohol | Diagnosis | ICD-10-CM |
| T51.91 | Toxic effect of unspecified alcohol, accidental (unintentional) | Diagnosis | ICD-10-CM |
| T51.91XA | Toxic effect of unspecified alcohol, accidental (unintentional), initial encounter | Diagnosis | ICD-10-CM |
| T51.91XD | Toxic effect of unspecified alcohol, accidental (unintentional), subsequent encounter | Diagnosis | ICD-10-CM |
| T51.91XS | Toxic effect of unspecified alcohol, accidental (unintentional), sequela | Diagnosis | ICD-10-CM |
| T51.92 | Toxic effect of unspecified alcohol, intentional self-harm | Diagnosis | ICD-10-CM |
| T51.92XA | Toxic effect of unspecified alcohol, intentional self-harm, initial encounter | Diagnosis | ICD-10-CM |
| T51.92XD | Toxic effect of unspecified alcohol, intentional self-harm, subsequent encounter | Diagnosis | ICD-10-CM |
| T51.92XS | Toxic effect of unspecified alcohol, intentional self-harm, sequela | Diagnosis | ICD-10-CM |
| T51.93 | Toxic effect of unspecified alcohol, assault | Diagnosis | ICD-10-CM |
| T51.93XA | Toxic effect of unspecified alcohol, assault, initial encounter | Diagnosis | ICD-10-CM |
| T51.93XD | Toxic effect of unspecified alcohol, assault, subsequent encounter | Diagnosis | ICD-10-CM |
| T51.93XS | Toxic effect of unspecified alcohol, assault, sequela | Diagnosis | ICD-10-CM |
| T51.94 | Toxic effect of unspecified alcohol, undetermined | Diagnosis | ICD-10-CM |
| T51.94XA | Toxic effect of unspecified alcohol, undetermined, initial encounter | Diagnosis | ICD-10-CM |
| T51.94XD | Toxic effect of unspecified alcohol, undetermined, subsequent encounter | Diagnosis | ICD-10-CM |
| T51.94XS | Toxic effect of unspecified alcohol, undetermined, sequela | Diagnosis | ICD-10-CM |
| Z65.8 | Other specified problems related to psychosocial circumstances | Diagnosis | ICD-10-CM |
| Z71.4 | Alcohol abuse counseling and surveillance | Diagnosis | ICD-10-CM |
| Thalassemia | | | |
| D56.0 | Alpha thalassemia | Diagnosis | ICD-10-CM |
| D56.1 | Beta thalassemia | Diagnosis | ICD-10-CM |
| D56.2 | Delta-beta thalassemia | Diagnosis | ICD-10-CM |
| D56.3 | Thalassemia minor | Diagnosis | ICD-10-CM |
| D56.5 | Hemoglobin E-beta thalassemia | Diagnosis | ICD-10-CM |
| D56.8 | Other thalassemias | Diagnosis | ICD-10-CM |
| S3845 | Genetic testing for alpha-thalassemia | Procedure | HCPCS |
| S3846 | Genetic testing for hemoglobin E beta-thalassemia | Procedure | HCPCS |
| Tuberculosis | | | |
| A15 | Respiratory tuberculosis | Diagnosis | ICD-10-CM |
| A15.0 | Tuberculosis of lung | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|--------|--|---------------|-----------|
| A15.4 | Tuberculosis of intrathoracic lymph nodes | Diagnosis | ICD-10-CM |
| A15.5 | Tuberculosis of larynx, trachea and bronchus | Diagnosis | ICD-10-CM |
| A15.6 | Tuberculous pleurisy | Diagnosis | ICD-10-CM |
| A15.7 | Primary respiratory tuberculosis | Diagnosis | ICD-10-CM |
| A15.8 | Other respiratory tuberculosis | Diagnosis | ICD-10-CM |
| A15.9 | Respiratory tuberculosis unspecified | Diagnosis | ICD-10-CM |
| A17 | Tuberculosis of nervous system | Diagnosis | ICD-10-CM |
| A17.0 | Tuberculous meningitis | Diagnosis | ICD-10-CM |
| A17.1 | Meningeal tuberculoma | Diagnosis | ICD-10-CM |
| A17.8 | Other tuberculosis of nervous system | Diagnosis | ICD-10-CM |
| A17.81 | Tuberculoma of brain and spinal cord | Diagnosis | ICD-10-CM |
| A17.82 | Tuberculous meningoencephalitis | Diagnosis | ICD-10-CM |
| A17.83 | Tuberculous neuritis | Diagnosis | ICD-10-CM |
| A17.89 | Other tuberculosis of nervous system | Diagnosis | ICD-10-CM |
| A17.9 | Tuberculosis of nervous system, unspecified | Diagnosis | ICD-10-CM |
| A18 | Tuberculosis of other organs | Diagnosis | ICD-10-CM |
| A18.0 | Tuberculosis of bones and joints | Diagnosis | ICD-10-CM |
| A18.01 | Tuberculosis of spine | Diagnosis | ICD-10-CM |
| A18.02 | Tuberculous arthritis of other joints | Diagnosis | ICD-10-CM |
| A18.03 | Tuberculosis of other bones | Diagnosis | ICD-10-CM |
| A18.09 | Other musculoskeletal tuberculosis | Diagnosis | ICD-10-CM |
| A18.1 | Tuberculosis of genitourinary system | Diagnosis | ICD-10-CM |
| A18.10 | Tuberculosis of genitourinary system, unspecified | Diagnosis | ICD-10-CM |
| A18.11 | Tuberculosis of kidney and ureter | Diagnosis | ICD-10-CM |
| A18.12 | Tuberculosis of bladder | Diagnosis | ICD-10-CM |
| A18.13 | Tuberculosis of other urinary organs | Diagnosis | ICD-10-CM |
| A18.14 | Tuberculosis of prostate | Diagnosis | ICD-10-CM |
| A18.15 | Tuberculosis of other male genital organs | Diagnosis | ICD-10-CM |
| A18.16 | Tuberculosis of cervix | Diagnosis | ICD-10-CM |
| A18.17 | Tuberculous female pelvic inflammatory disease | Diagnosis | ICD-10-CM |
| A18.18 | Tuberculosis of other female genital organs | Diagnosis | ICD-10-CM |
| A18.2 | Tuberculous peripheral lymphadenopathy | Diagnosis | ICD-10-CM |
| A18.3 | Tuberculosis of intestines, peritoneum and mesenteric glands | Diagnosis | ICD-10-CM |
| A18.31 | Tuberculous peritonitis | Diagnosis | ICD-10-CM |
| A18.32 | Tuberculous enteritis | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|---------|--|---------------|-----------|
| A18.39 | Retroperitoneal tuberculosis | Diagnosis | ICD-10-CM |
| A18.4 | Tuberculosis of skin and subcutaneous tissue | Diagnosis | ICD-10-CM |
| A18.5 | Tuberculosis of eye | Diagnosis | ICD-10-CM |
| A18.50 | Tuberculosis of eye, unspecified | Diagnosis | ICD-10-CM |
| A18.51 | Tuberculous episcleritis | Diagnosis | ICD-10-CM |
| A18.52 | Tuberculous keratitis | Diagnosis | ICD-10-CM |
| A18.53 | Tuberculous chorioretinitis | Diagnosis | ICD-10-CM |
| A18.54 | Tuberculous iridocyclitis | Diagnosis | ICD-10-CM |
| A18.59 | Other tuberculosis of eye | Diagnosis | ICD-10-CM |
| A18.6 | Tuberculosis of (inner) (middle) ear | Diagnosis | ICD-10-CM |
| A18.7 | Tuberculosis of adrenal glands | Diagnosis | ICD-10-CM |
| A18.8 | Tuberculosis of other specified organs | Diagnosis | ICD-10-CM |
| A18.81 | Tuberculosis of thyroid gland | Diagnosis | ICD-10-CM |
| A18.82 | Tuberculosis of other endocrine glands | Diagnosis | ICD-10-CM |
| A18.83 | Tuberculosis of digestive tract organs, not elsewhere classified | Diagnosis | ICD-10-CM |
| A18.84 | Tuberculosis of heart | Diagnosis | ICD-10-CM |
| A18.85 | Tuberculosis of spleen | Diagnosis | ICD-10-CM |
| A18.89 | Tuberculosis of other sites | Diagnosis | ICD-10-CM |
| A19 | Miliary tuberculosis | Diagnosis | ICD-10-CM |
| A19.0 | Acute miliary tuberculosis of a single specified site | Diagnosis | ICD-10-CM |
| A19.1 | Acute miliary tuberculosis of multiple sites | Diagnosis | ICD-10-CM |
| A19.2 | Acute miliary tuberculosis, unspecified | Diagnosis | ICD-10-CM |
| A19.8 | Other miliary tuberculosis | Diagnosis | ICD-10-CM |
| A19.9 | Miliary tuberculosis, unspecified | Diagnosis | ICD-10-CM |
| B90 | Sequelae of tuberculosis | Diagnosis | ICD-10-CM |
| B90.0 | Sequelae of central nervous system tuberculosis | Diagnosis | ICD-10-CM |
| B90.1 | Sequelae of genitourinary tuberculosis | Diagnosis | ICD-10-CM |
| B90.2 | Sequelae of tuberculosis of bones and joints | Diagnosis | ICD-10-CM |
| B90.8 | Sequelae of tuberculosis of other organs | Diagnosis | ICD-10-CM |
| B90.9 | Sequelae of respiratory and unspecified tuberculosis | Diagnosis | ICD-10-CM |
| J65 | Pneumoconiosis associated with tuberculosis | Diagnosis | ICD-10-CM |
| O98.0 | Tuberculosis complicating pregnancy, childbirth and the puerperium | Diagnosis | ICD-10-CM |
| O98.01 | Tuberculosis complicating pregnancy | Diagnosis | ICD-10-CM |
| O98.011 | Tuberculosis complicating pregnancy, first trimester | Diagnosis | ICD-10-CM |
| O98.012 | Tuberculosis complicating pregnancy, second trimester | Diagnosis | ICD-10-CM |

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Second Edition (CPT-2), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), and International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS) Codes Used to Define Covariates in this Request

| Code | Description | Code Category | Code Type |
|-------------|--|----------------------|------------------|
| O98.013 | Tuberculosis complicating pregnancy, third trimester | Diagnosis | ICD-10-CM |
| O98.019 | Tuberculosis complicating pregnancy, unspecified trimester | Diagnosis | ICD-10-CM |
| O98.02 | Tuberculosis complicating childbirth | Diagnosis | ICD-10-CM |
| O98.03 | Tuberculosis complicating the puerperium | Diagnosis | ICD-10-CM |
| P37.0 | Congenital tuberculosis | Diagnosis | ICD-10-CM |

Appendix F. List of Generic Names of Medical Products Used to Define Covariates in this Request

| Generic Name |
|--------------|
|--------------|

| |
|----------------------------------|
| Smoking Current and Former |
| famotidine ¹ |
| nicotine |
| nicotine bitartrate |
| nicotine polacrilex |
| pseudoephedrine HCl ¹ |
| varenicline tartrate |

| Immunosuppressant Disease or Treatment |
|--|
|--|

| |
|-------------------------------------|
| abatacept |
| abemaciclib |
| acalabrutinib |
| adalimumab |
| ado-trastuzumab emtansine |
| afatinib dimaleate |
| aldesleukin |
| alectinib HCl |
| alemtuzumab |
| alpelisib |
| altretamine |
| anakinra |
| anti-thymocyte globulin |
| anti-thymocyte globulin,rabbit |
| apremilast |
| arsenic trioxide |
| asparaginase |
| asparaginase (Erwinia chrysanthemi) |
| atezolizumab |
| auranofin |
| aurothioglucose |
| avapritinib |
| avelumab |
| axicabtagene ciloleucel |
| axitinib |
| azacitidine |
| azathioprine |
| azathioprine sodium |
| baricitinib |
| basiliximab |

Appendix F. List of Generic Names of Medical Products Used to Define Covariates in this Request

| Generic Name |
|-------------------------------|
| belantamab mafodotin-blmf |
| belatacept |
| belimumab |
| belinostat |
| bendamustine HCl |
| betamethasone |
| bevacizumab |
| bevacizumab-awwb |
| bevacizumab-bvzr |
| bexarotene |
| binimetinib |
| bleomycin sulfate |
| blinatumomab |
| bortezomib |
| bosutinib |
| brentuximab vedotin |
| brexucabtagene autoleucel |
| brigatinib |
| budesonide |
| busulfan |
| cabazitaxel |
| cabozantinib s-malate |
| calaspargase pegol-mknl |
| canakinumab |
| canakinumab/PF |
| capecitabine |
| capmatinib HCl |
| capmatinib hydrochloride |
| carboplatin |
| carfilzomib |
| carmustine |
| carmustine in polifeprosan |
| carmustine in polifeprosan 20 |
| cemiplimab-rwlc |
| ceritinib |
| cetuximab |
| chlorambucil |
| cisplatin |

Appendix F. List of Generic Names of Medical Products Used to Define Covariates in this Request

| Generic Name |
|-------------------------------------|
| cladribine |
| clofarabine |
| cobimetinib fumarate |
| copanlisib di-HCl |
| copanlisib HCl |
| cortisone acetate |
| crizotinib |
| cyclophosphamide |
| cyclosporine |
| cyclosporine, modified |
| cytarabine |
| cytarabine liposome |
| cytarabine/PF |
| dabrafenib mesylate |
| dacarbazine |
| daclizumab |
| dacomitinib |
| dactinomycin |
| daratumumab |
| daratumumab-hyaluronidase-fihj |
| dasatinib |
| daunorubicin citrate liposome |
| daunorubicin HCl |
| daunorubicin/cytarabine liposomal |
| decitabine |
| deflazacort |
| denileukin diftitox |
| dexamethasone |
| dexamethasone intensol |
| dinutuximab |
| docetaxel |
| docetaxel (non-alcohol formula) |
| doxorubicin HCl |
| doxorubicin HCl liposomal |
| doxorubicin HCl pegylated liposomal |
| durvalumab |
| duvelisib |
| elotuzumab |

Appendix F. List of Generic Names of Medical Products Used to Define Covariates in this Request

| Generic Name |
|---|
| emapalumab-lzsg |
| enasidenib mesylate |
| encorafenib |
| enfortumab vedotin-ejfv |
| entrectinib |
| epirubicin HCl |
| erdafitinib |
| eribulin mesylate |
| erlotinib |
| erlotinib HCl |
| etanercept |
| etoposide |
| etoposide phosphate |
| everolimus |
| fam-trastuzumab deruxtecan-nxki |
| fedratinib dihydrochloride |
| fedratinib HCl |
| fingolimod HCl |
| fingolimod hydrochloride |
| floxuridine |
| fludarabine phosphate |
| fludrocortisone acetate |
| fluorouracil |
| fostamatinib disodium |
| gefitinib |
| gemcitabine HCl |
| gemcitabine HCl-NaCl |
| gemcitabine HCl in 0.9 % sodium chloride |
| gemtuzumab ozogamicin |
| gilteritinib fumarate |
| glasdegib maleate |
| glucarpidase |
| gold sodium thiomalate |
| golimumab |
| hydrocortisone |
| hydroxyurea |
| imbritumomab tiuxetan for indium-111 (IN-111) |
| imbritumomab tiuxetan for yttrium/90 (Y/90) |

Appendix F. List of Generic Names of Medical Products Used to Define Covariates in this Request

| Generic Name |
|--|
| ibrutinib |
| idarubicin HCl |
| idelalisib |
| idelalisib tab 150 mg |
| ifosfamide |
| ifosfamide/mesna |
| imatinib mesylate |
| inebilizumab-cdon |
| inotuzumab ozogamicin |
| interferon alfa-2a |
| interferon alfa-2b |
| interferon alfa-2b,recomb. |
| interferon alfa-n3 |
| interferon gamma-1b,recomb. |
| ipilimumab |
| irinotecan HCl |
| irinotecan HCl liposomal |
| irinotecan liposomal |
| isatuximab-irfc |
| ivosidenib |
| ixabepilone |
| ixazomib citrate |
| kit for prep yttrium-90/ibritumomab tiuxetan/albumin human |
| lapatinib ditosylate |
| larotrectinib sulfate |
| leflunomide |
| lenalidomide |
| lenvatinib |
| lenvatinib mesylate |
| lisocabtagene maraleucel |
| lomustine |
| lorlatinib |
| lurbnectedin |
| lymphocyte immune globulin,antithymocyte (equine) |
| mechlorethamine HCl |
| melphalan |
| melphalan HCl |
| mercaptopurine |

Appendix F. List of Generic Names of Medical Products Used to Define Covariates in this Request

| Generic Name |
|----------------------------|
| methotrexate |
| methotrexate sodium |
| methotrexate sodium/PF |
| methotrexate/PF |
| methylprednisolone |
| midostaurin |
| mitomycin |
| mitoxantrone HCl |
| mogamulizumab-kpkc |
| moxetumomab pasudotox-tdfk |
| muromonab CD3 |
| mycophenolate mofetil |
| mycophenolate mofetil HCl |
| mycophenolate sodium |
| naxitamab-gqgk |
| necitumumab |
| necitumumab IV |
| nelarabine |
| neratinib maleate |
| nilotinib |
| nilotinib HCl |
| niraparib tosylate |
| nivolumab |
| obinutuzumab |
| ofatumumab |
| olaparib |
| olaratumab |
| omacetaxine mepesuccinate |
| osimertinib mesylate |
| oxaliplatin |
| paclitaxel |
| paclitaxel protein-bound |
| palbociclib |
| panitumumab |
| panobinostat lactate |
| pazopanib HCl |
| pegaspargase |
| peginterferon alfa-2b |

Appendix F. List of Generic Names of Medical Products Used to Define Covariates in this Request

| Generic Name |
|--|
| pembrolizumab |
| pemetrexed disodium |
| pemigatinib |
| pentostatin |
| pertuzumab |
| pertuzumab-trastuzumab-hyaluronidase-zzxf |
| pexidartinib HCl |
| pexidartinib hydrochloride |
| plicamycin |
| polatuzumab vedotin-piiq |
| pomalidomide |
| ponatinib HCl |
| pralatrexate |
| pralsetinib |
| prednisolone |
| prednisolone acetate |
| prednisolone sodium phosphate |
| prednisone |
| procarbazine HCl |
| ramucirumab |
| regorafenib |
| ribociclib succinate |
| ribociclib succinate/letrozole |
| rilonacept |
| ripretinib |
| rituximab |
| rituximab-abbs |
| rituximab-arrx |
| rituximab-pvvr |
| rituximab/hyaluronidase, human |
| rituximab/hyaluronidase, human recombinant |
| romidepsin |
| rucaparib camsylate |
| ruxolitinib phosphate |
| sacituzumab govitecan-hziy |
| sarilumab |
| satralizumab-mwge |
| selinexor |

Appendix F. List of Generic Names of Medical Products Used to Define Covariates in this Request

| Generic Name |
|--|
| selpercatinib |
| selumetinib sulfate |
| selumetinib sulfate/vitamin E TPGS |
| sipuleucel-T |
| sipuleucel-T/lactated ringers solution |
| sirolimus |
| sonidegib phosphate |
| sorafenib tosylate |
| streptozocin |
| sunitinib malate |
| tacrolimus |
| tacrolimus anhydrous |
| tacrolimus, micronized |
| tafasitamab-cxix |
| tagraxofusp-erzs |
| talazoparib tosylate |
| talimogene laherparepvec |
| tazemetostat HBr |
| tazemetostat hydrobromide |
| temozolomide |
| temsirolimus |
| teniposide |
| tepotinib HCl |
| thalidomide |
| thioguanine |
| thiotepa |
| tisagenlecleucel |
| tisagenlecleucel-T |
| tocilizumab |
| tofacitinib citrate |
| topotecan HCl |
| tositumomab |
| trabectedin |
| trametinib dimethyl sulfoxide |
| trametinib dimethyl sulfoxide-tab |
| trastuzumab |
| trastuzumab-anns |
| trastuzumab-dkst |

Appendix F. List of Generic Names of Medical Products Used to Define Covariates in this Request

| Generic Name |
|--------------|
|--------------|

trastuzumab-dttb
 trastuzumab-hyaluronidase-oysk
 trastuzumab-pkrb
 trastuzumab-qyyp
 trifluridine/tipiracil HCl
 triamcinolone
 trifluridine-tipiracil
 trilaciclib dihydrochloride
 tucatinib
 umbralisib tosylate
 upadacitinib
 uracil mustard
 valrubicin
 vandetanib
 vemurafenib
 venetoclax
 vinblastine sulfate
 vincristine sulfate
 vincristine sulfate liposomal
 vincristine sulfate liposome
 vinorelbine tartrate
 vismodegib
 voclosporin
 vorinostat
 zanubrutinib
 ziv-aflibercept

| Potent Cytochrome P450 3A (CYP3A) Inhibitors |
|--|
|--|

apalutamide
 fosphenytoin sodium
 phenytoin
 phenytoin sodium
 phenytoin sodium extended

| CYP3A Inhibitors |
|------------------|
|------------------|

St. John's wort
 agar
 azelastine HCl/fluticasone propionate
 azelastine/fluticasone/sodium chloride/sodium bicarbonate
 betamethasone

Appendix F. List of Generic Names of Medical Products Used to Define Covariates in this Request

| Generic Name |
|--|
| betamethasone acetate and sodium phos in sterile water/PF |
| betamethasone acetate and sodium phosph/norflurane/HFC 245fa |
| betamethasone acetate, micronized |
| betamethasone acetate/betamethasone sodium phosphate |
| betamethasone acetate/betamethasone sodium phosphate/water |
| betamethasone dipropionate |
| betamethasone dipropionate/propylene glycol |
| betamethasone sodium phos/chondroitin sulfate A sodium/PF |
| betamethasone sodium phosph in sterile water for injection |
| betamethasone sodium phosphate |
| betamethasone valerate |
| budesonide |
| budesonide, micronized |
| budesonide/formoterol fumarate |
| budesonide/glycopyrrolate/formoterol fumarate |
| bupivacaine HCl/dexamethasone sodium phos in sterile water |
| calcipotriene/betamethasone dipropionate |
| carbamazepine |
| ciclesonide |
| ciclopirox/triamcinolone acetonide |
| ciprofloxacin HCl/dexamethasone |
| clotrimazole/betamethasone dipropionate |
| clotrimazole/betamethasone dipropionate/zinc oxide |
| dexamethasone |
| dexamethasone acetate |
| dexamethasone acetate and sodium phosphate in sterile water |
| dexamethasone acetate in sodium chloride, iso-osmotic |
| dexamethasone acetate, micronized |
| dexamethasone isonicotinate |
| dexamethasone sod ph/moxifloxacin HCl in NaCl,iso-osmotic/PF |
| dexamethasone sod ph/moxifloxacin HCl/ketorolac/sod chlor/PF |
| dexamethasone sodium phosphate |
| dexamethasone sodium phosphate in 0.9 % sodium chloride |
| dexamethasone sodium phosphate/PF |
| dexamethasone sodium phosphate/lidocaine HCl |
| dexamethasone, micronized |
| dexamethasone/PF |
| dexamethasone/PF/norflurane/pentafluoropropane (HFC 245fa) |
| dexamethasone/saliva collection device |
| econazole nitrate/triamcinolone acetonide |
| efavirenz |
| efavirenz/emtricitabine/tenofovir disoproxil fumarate |

Appendix F. List of Generic Names of Medical Products Used to Define Covariates in this Request

| Generic Name |
|---|
| efavirenz/lamivudine/tenofovir disoproxil fumarate |
| fluticasone furoate |
| fluticasone furoate/umeclidinium bromide/vilanterol trifenate |
| fluticasone furoate/vilanterol trifenate |
| fluticasone propionate |
| fluticasone propionate, micronized |
| fluticasone propionate/emollient combination no.65 |
| fluticasone propionate/salmeterol xinafoate |
| fluticasone propionate/sodium chloride/sodium bicarbonate |
| gatifloxacin/dexamethasone sodium phosphate |
| glucose sensor,implantable,continuous/dexamethasone acetate |
| methylprednisolone |
| methylprednisolone acetate |
| methylprednisolone acetate in sodium chloride,iso-osmotic/PF |
| methylprednisolone acetate in sterile water for injection |
| methylprednisolone acetate, micronized |
| methylprednisolone acetate/bupivacaine HCl |
| methylprednisolone acetate/bupivacaine HCl in sterile water |
| methylprednisolone acetate/norflurane/HFC 245fa |
| methylprednisolone sodium succinate |
| methylprednisolone sodium succinate/PF |
| methylprednisolone, micronized |
| minoxidil/betamethasone dipropionate |
| mometasone furoate |
| mometasone furoate/dimethicone |
| mometasone furoate/formoterol fumarate |
| neomycin sulfate/bacitracin/polymyxin B |
| neomycin sulfate/dexamethasone sodium phosphate |
| neomycin/polymyxin B sulfate/dexamethasone |
| nevirapine |
| nystatin/triamcinolone acetonide |
| phenobarbital |
| phenobarbital sodium |
| phenobarbital/hyoscyamine sulf/atropine sulf/scopolamine Hb |
| prednisone |
| prednisone micronized |
| rifampin |
| rifampin/isoniazid |
| rifampin/isoniazid/pyrazinamide |
| tobramycin/dexamethasone |
| triamcinolone |
| triamcinolone acetonide |

Appendix F. List of Generic Names of Medical Products Used to Define Covariates in this Request

| Generic Name |
|---|
| triamcinolone acetonide in 0.9 % sodium chloride |
| triamcinolone acetonide/0.9% sodium chloride/PF |
| triamcinolone acetonide/PF |
| triamcinolone acetonide/bupivacaine/in 0.9% sodium chloride |
| triamcinolone acetonide/dimethicone |
| triamcinolone acetonide/dimethicone/silicone, adhesive |
| triamcinolone acetonide/emollient combination no.45 |
| triamcinolone acetonide/emollient combination no.86 |
| triamcinolone acetonide/gauze bandage/silicone, adhesive |
| triamcinolone acetonide/lidocaine HCl |
| triamcinolone acetonide/lidocaine/prilocaine |
| triamcinolone acetonide/low sensitizing base |
| triamcinolone acetonide/moxifloxacin HCl/water/PF |
| triamcinolone acetonide/niacinamide |
| triamcinolone acetonide/silicones |
| triamcinolone acetonide/skin clnsr6/Emollient 27 |
| triamcinolone diacetate |
| triamcinolone diacetate in 0.9 % sodium chloride |
| triamcinolone diacetate in 0.9 % sodium chloride/PF |
| triamcinolone diacetate, micronized |
| triamcinolone hexacetonide |
| triamcinolone hexacetonide, micronized |
| triamcinolone/norflurane and pentafluoropropane (HFC 245fa) |

CYP3A Dependent Drugs

alfuzosin HCl
 amiodarone HCl
 amiodarone HCl/dextrose 5 % in water
 amiodarone in dextrose, iso-osmotic
 clozapine
 colchicine
 dextromethorphan Hbr/quinidine sulfate
 dihydroergotamine mesylate
 dronedarone HCl
 ergotamine tartrate
 ergotamine tartrate/caffeine
 ezetimibe/simvastatin
 flecainide acetate
 lovastatin
 lurasidone HCl
 meperidine HCl

Appendix F. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name

meperidine HCl in 0.9 % sodium chloride/PF
 meperidine HCl/PF
 methylergonovine maleate
 midazolam HCl
 pimozone
 propafenone HCl
 quinidine gluconate
 quinidine sulfate
 ranolazine
 sildenafil citrate
 simvastatin
 triazolam

Other CYP3A Interactors

abacavir sulfate/lamivudine/zidovudine
 abemaciclib
 acyclovir/lidocaine hcl
 amlodipine benzoate
 amlodipine besylate
 amlodipine besylate/atorvastatin calcium
 amlodipine besylate/benazepril HCl
 amlodipine besylate/celecoxib
 amlodipine besylate/olmesartan medoxomil
 amlodipine besylate/valsartan
 amlodipine besylate/valsartan/hydrochlorothiazide
 atazanavir sulfate
 atazanavir sulfate/cobicistat
 atorvastatin calcium
 bedaquiline fumarate
 bictegravir sodium/emtricitabine/tenofovir alafenamide fumar
 blood collection set/lidocaine/prilocaine
 bosentan
 bupropion HBr
 bupropion HCl
 ceritinib
 clarithromycin
 cyclobenzaprine HCl/lidocaine/menthol
 cyclobenzaprine/lidocaine/prilocaine/glycerin
 cyclosporine
 cyclosporine, modified
 cyclosporine/chondroitin sulfate A sodium
 darunavir eth/cobicistat/emtricitabine/tenofovir alafenamide

Appendix F. List of Generic Names of Medical Products Used to Define Covariates in this Request

| Generic Name |
|--|
| darunavir ethanolate |
| darunavir ethanolate/cobicistat |
| dasatinib |
| desogestrel-ethinyl estradiol |
| desogestrel-ethinyl estradiol/ethinyl estradiol |
| dexamethasone sodium phosphate/lidocaine HCl |
| diclofenac sodium/lidocaine |
| diclofenac sodium/lidocaine HCl/kinesiology tape |
| diclofenac sodium/lidocaine/methyl salicylate/camphor |
| didanosine |
| digoxin |
| digoxin immune fab |
| digoxin, micronized |
| diltiazem HCl |
| diltiazem HCl in 0.9 % sodium chloride |
| diltiazem HCl/dextrose 5 % in water |
| doravirine/lamivudine/tenofovir disoproxil fumarate |
| drospirenone/ethinyl estradiol/levomefolate calcium |
| elbasvir/grazoprevir |
| elvitegravir/cobicistat/emtricitabine/tenofovir alafenamide |
| elvitegravir/cobicistat/emtricitabine/tenofovir disoproxil |
| emtricitabine |
| emtricitabine/rilpivirine HCl/tenofovir alafenamide fumarate |
| emtricitabine/rilpivirine HCl/tenofovir disoproxil fumarate |
| emtricitabine/tenofovir alafenamide fumarate |
| emtricitabine/tenofovir disoproxil fumarate |
| encorafenib |
| erythromycin base |
| erythromycin base in ethanol |
| erythromycin base/benzoyl peroxide |
| erythromycin estolate |
| erythromycin ethylsuccinate |
| erythromycin lactobionate |
| erythromycin stearate |
| ethinyl estradiol |
| ethinyl estradiol/drospirenone |
| ethynodiol diacetate-ethinyl estradiol |
| etonogestrel/ethinyl estradiol |
| ezetimibe/rosuvastatin calcium |
| felodipine |
| fentanyl |
| fentanyl citrate |

Appendix F. List of Generic Names of Medical Products Used to Define Covariates in this Request

| Generic Name |
|--|
| fentanyl citrate in 0.9 % sodium chloride/PF |
| fentanyl citrate in dextrose 5% in water/PF |
| fentanyl citrate/PF |
| fentanyl citrate/bupivacaine HCl in 0.9 % sodium chloride/PF |
| fentanyl citrate/ropivacaine HCl/sodium chloride 0.9%/PF |
| fluconazole/ibuprofen/itraconazole/terbinafine HCl |
| fluticasone propionate/salmeterol xinafoate |
| fosamprenavir calcium |
| gabapentin/lidocaine |
| gabapentin/lidocaine HCl/gauze bandage/silicone adhesive |
| gabapentin/lidocaine HCl/menthol |
| gabapentin/lidocaine HCl/silicone adhesive |
| gabapentin/lidocaine/prilocaine/transparent dressing |
| glecaprevir/pibrentasvir |
| hydrocortisone acetate/lidocaine HCl/aloe vera |
| ibrutinib |
| indinavir sulfate |
| isavuconazonium sulfate |
| itraconazole |
| itraconazole, micronized |
| ivosidenib |
| ketoconazole |
| ketoconazole/hydrocortisone |
| ketoconazole/iodoquinol/hydrocortisone |
| ketoconazole/miconazole nitrate |
| ketoconazole/niacinamide |
| ketoconazole/skin cleanser combination no.28 |
| lamivudine/tenofovir disoproxil fumarate |
| lamivudine/zidovudine |
| lansoprazole/amoxicillin trihydrate/clarithromycin |
| levamlodipine maleate |
| levoketoconazole |
| levonorgestrel/ethinyl estradiol |
| levonorgestrel/ethinyl estradiol and ethinyl estradiol |
| levonorgestrel/ethinyl estradiol/ferrous bisglycinate |
| lidocaine |
| lidocaine HCl |
| lidocaine HCl buffered with 8.4 % sodium bicarbonate |
| lidocaine HCl buffered with sodium phosphate |
| lidocaine HCl in 0.9 % sodium chloride/PF |
| lidocaine HCl in dextrose 5% in water/PF |
| lidocaine HCl in dextrose 7.5 % in water/PF |

Appendix F. List of Generic Names of Medical Products Used to Define Covariates in this Request

| Generic Name |
|--|
| lidocaine HCl in sodium chloride, iso-osmotic/PF |
| lidocaine HCl/PF |
| lidocaine HCl/PF/adhesive bandage |
| lidocaine HCl/PF/norflurane/pentafluoropropane (HFC 245fa) |
| lidocaine HCl/aloe vera/collagen,bovine |
| lidocaine HCl/benzalkonium chloride |
| lidocaine HCl/benzalkonium chloride/alcohol |
| lidocaine HCl/benzocaine/methyl salicylate/capsaicin |
| lidocaine HCl/benzyl alcohol |
| lidocaine HCl/collagen |
| lidocaine HCl/epinephrine |
| lidocaine HCl/epinephrine bitartrate |
| lidocaine HCl/epinephrine bitartrate/tetracaine HCl |
| lidocaine HCl/epinephrine in sodium chloride, iso-osmotic |
| lidocaine HCl/epinephrine/PF |
| lidocaine HCl/glycerin |
| lidocaine HCl/hyaluronic acid/aloe vera/collagen |
| lidocaine HCl/hydrocortisone acetate |
| lidocaine HCl/menthol |
| lidocaine HCl/methyl salicylate/capsaicin/menthol |
| lidocaine HCl/methyl salicylate/menthol |
| lidocaine HCl/palm oil |
| lidocaine HCl/phenylephrine HCl/water for injection,sterile |
| lidocaine HCl/phenylephrine/balanced salt irrigation no.2/PF |
| lidocaine HCl/racepinephrine HCl/tetracaine HCl |
| lidocaine HCl/vitamin E acetate/tea tree oil |
| lidocaine/aloe vera |
| lidocaine/benzethonium chloride |
| lidocaine/dimethicone |
| lidocaine/emollient combination no.102 |
| lidocaine/menthol |
| lidocaine/menthol/aloe vera |
| lidocaine/menthol/camphor/dimethicone |
| lidocaine/methyl salicylate/camphor |
| lidocaine/methyl salicylate/capsaicin/menthol |
| lidocaine/methyl salicylate/menthol |
| lidocaine/methyl salicylate/menthol/camphor |
| lidocaine/phenylephrine HCl/glycerin/petrolatum,white |
| lidocaine/prilocaine |
| lidocaine/prilocaine/benzalkonium chloride/dressing |
| lidocaine/prilocaine/lidocaine HCl |
| lidocaine/prilocaine/methyl salicylate/menthol |

Appendix F. List of Generic Names of Medical Products Used to Define Covariates in this Request

| Generic Name |
|--|
| lidocaine/prilocaine/silicone, adhesive |
| lidocaine/silicone, adhesive |
| lidocaine/skin cleanser combination no.37 |
| lidocaine/tetracaine |
| lidocaine/tetracaine/benzocaine |
| lidocaine/transparent dressing |
| lidocaine/trolamine salicylate/capsaicin |
| mag hydroxide/al hydroxide/simeth/diphenhydramine/lidocaine |
| maraviroc |
| methadone HCl |
| methadone hydrochloride in 0.9 % sodium chloride |
| midazolam |
| midazolam HCl |
| midazolam HCl in 0.9 % sodium chloride |
| midazolam HCl in 0.9 % sodium chloride/PF |
| midazolam HCl in dextrose 5% in water |
| midazolam HCl/PF |
| midazolam in sodium chloride, iso-osmotic |
| midazolam in sodium chloride, iso-osmotic/PF |
| midazolam/ketamine HCl/ondansetron HCl |
| mupirocin/lidocaine |
| naltrexone HCl/bupropion HCl |
| nelfinavir mesylate |
| neomycin sulfate/bacitracin zinc/polymyxin B/lidocaine HCl |
| neratinib maleate |
| nicardipine HCl |
| nicardipine HCl in 0.9 % sodium chloride |
| nicardipine in dextrose, iso-osmotic |
| nicardipine in sodium chloride, iso-osmotic |
| nifedipine |
| nifedipine, micronized |
| nilotinib HCl |
| norelgestromin/ethinyl estradiol |
| norethindrone acetate-ethinyl estradiol |
| norethindrone acetate-ethinyl estradiol/ferrous fumarate |
| norethindrone-ethinyl estradiol |
| norethindrone-ethinyl estradiol/ferrous fumarate |
| norgestimate-ethinyl estradiol |
| norgestrel-ethinyl estradiol |
| nystatin/lidocaine hcl/diphenhydramine hcl |
| olmesartan medoxomil/amlodipine besylate/hydrochlorothiazide |
| ombitasvir/paritaprevir/ritonavir/dasabuvir sodium |

Appendix F. List of Generic Names of Medical Products Used to Define Covariates in this Request

| Generic Name |
|---|
| omeprazole/clarithromycin/amoxicillin trihydrate |
| perindopril arginine/amlodipine besylate |
| potassium chloride/lidocaine HCl in 0.9 % sodium chloride |
| quetiapine fumarate |
| racepinephrine HCl/lidocaine HCl/balanced salt soln no.7/PF |
| raltegravir potassium |
| rivaroxaban |
| rosuvastatin calcium |
| salicylic acid/cimetidine/lidocaine |
| salmeterol xinafoate |
| saquinavir mesylate |
| segesterone acetate/ethinyl estradiol |
| sirolimus |
| sirolimus protein-bound |
| sofosbuvir/velpatasvir/voxilaprevir |
| tacrolimus |
| tacrolimus anhydrous |
| tacrolimus in vehicle base no.238 |
| tacrolimus, micronized |
| tacrolimus/hyaluronate sodium/niacinamide |
| tacrolimus/niacinamide |
| telmisartan/amlodipine besylate |
| temsirolimus |
| tenofovir alafenamide |
| tenofovir disoproxil fumarate |
| tipranavir |
| tipranavir/vitamin E TPGS |
| trazodone HCl |
| triamcinolone acetonide/lidocaine HCl |
| venetoclax |
| vinblastine sulfate |
| vincristine sulfate |
| vincristine sulfate liposomal |
| vitamin E/lidocaine/aloe vera/collagen |
| voriconazole |
| warfarin sodium |
| zidovudine |

¹ One code each for famotidine and pseudoephedrine HCl were erroneously included in the analysis. As both codes were for over-the-counter medications that appeared in the data from only one data partner, their inclusion is not expected to impact the overall results.

Appendix G. Specifications Defining Parameters for this Request

This request executed the Cohort Identification and Descriptive Analysis (CIDA) tool (version 11.3.0) to estimate rates of monoclonal antibody utilization among authorized and unauthorized users in the Rapid COVID Sentinel Distributed Database (SDD).

Query period: December 22, 2021 - April 30, 2022
Pre-index enrollment requirement: 183 Days
Post-index enrollment requirement: 0 Days
Enrollment gap: 45 Days
Age Groups: 0-11, 12-17, 18-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75-84, 85+ Years
Stratifications: Age Group, Geographic Region (HHS Region), and Year-Month
Censor output categorization: N/A
Distribution of index-defining codes: No
Envelope macro: 1. Do not reclassify if encounter occurs on day of admission (ADate).
Freeze data: No

Exposure/Event

| Scenario | Coverage Requirement | Baseline? | Index Exposure/Event | Cohort Definition | Washout Period | Incident with Respect to: | Exclude Evidence of Days Supply if | | Principal Diagnosis Position | Forced Supply to Attach to Dispensings | Censor Enrollment at Evidence of | |
|----------|----------------------|-----------|-------------------------------------|--|----------------|---------------------------|------------------------------------|---------|------------------------------|--|----------------------------------|----------------------------|
| | | | | | | | Exposure | Washout | | | | |
| 1 | Medical and Drug | Y | Paxlovid (Nirmatrelvir + ritonavir) | First valid index date during query period | 0 days | N/A | Exposure | Washout | Any | N/A | N/A | *Death; *Query End Date |
| 2 | Medical | Y | Sotrovimab | First valid index date during query period | 0 days | N/A | Exposure | Washout | Any | N/A | N/A | *Death; *Query End Date |
| 3 | Medical | Y | Bebtelovimab | First valid index date during query period | 0 days | N/A | Exposure | Washout | Any | N/A | N/A | *Death; *Query End Date |
| 4 | Medical and Drug | Y | Molnupiravir | First valid index date during query period | 0 days | N/A | Exposure | Washout | Any | N/A | N/A | *Death; *Query End Date |

| | | | | | | | | | | | |
|---|---------|---|--|--|--------|-----|-----|-----------|-----|-----|----------------------------|
| 5 | Medical | Y | Remdesivir | First valid index date during query period | 0 days | N/A | N/A | AV/OA/ED* | N/A | N/A | *Death; *Query End Date |
| 6 | Medical | Y | Same day Bamlanivimab + Etesevimab (defined by combo) | First valid index date during query period | 0 days | N/A | N/A | Any | N/A | N/A | *Death; *Query End Date |
| 7 | Medical | Y | Casirivimab or Imdevimab or (Casirivimab and Imdevimab) | First valid index date during query period | 0 days | N/A | N/A | Any | N/A | N/A | *Death; *Query End Date |

Appendix G. Specifications Defining Parameters for this Request

| Scenario | Coverage Requirement | Baseline? | Inclusion/Exclusion Criteria | | | | | | | |
|----------|----------------------|-----------|------------------------------|----------|--------------|------------------------------|-------------------------|-----------------------|---|--|
| | | | Inclusion/Exclusion | Criteria | Care Setting | Principal Diagnosis Position | Evaluation Period Start | Evaluation Period End | Number of Instances the Criteria Should Be Found in Evaluation Period | Forced Supply to Attach to Dispensings |
| 1 | Medical and Drug | Y | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 2 | Medical | Y | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 3 | Medical | Y | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 4 | Medical and Drug | Y | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 5 | Medical | Y | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 6 | Medical | Y | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 7 | Medical | Y | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*AV = Ambulatory Visit, OA = Other Ambulatory Visit, ED = Emergency Department Visit

International Classification of Diseases, Ninth and Tenth Revisions (ICD-9 and ICD-10), Healthcare Common Procedure Coding System (HCPCS), and Current Procedural Terminology (CPT) codes are provided by Optum360

National Drug Codes (NDCs) are checked against First Data Bank's "National Drug Data File (NDDF®) Plus.

Appendix H. Specifications Defining Baseline Characteristics in this Request

| Baseline Characteristics | | | | | | |
|---|---------------------------|------------------------------|--------------------------------|------------------------------|---|--|
| Covariate | Care Setting ¹ | Principal Diagnosis Position | Evaluation Period Start (Days) | Evaluation Period End (Days) | Exclude Evidence of Days Supply if Covariate Includes Dispensings | Number of Instances the Covariate Should be Found in Evaluation Period |
| Outpatient | AV, OA | N/A | 0 | 0 | N/A | 1 |
| Inpatient | IP | N/A | 0 | 0 | N/A | 1 |
| Emergency Department | ED | N/A | 0 | 0 | N/A | 1 |
| COVID-19 on the same day as index date | Any | N/A | 0 | 0 | N/A | 1 |
| COVID-19 1-2 day prior to index date | Any | N/A | -2 | -1 | N/A | 1 |
| COVID-19 3-5 day prior to index date | Any | N/A | -5 | -3 | N/A | 1 |
| COVID-19 6-7 days prior to index date | Any | N/A | -7 | -6 | N/A | 1 |
| COVID-19 8-14 days prior to index date | Any | N/A | -14 | -8 | N/A | 1 |
| COVID-19 15-30 days prior to index date | Any | N/A | -30 | -15 | N/A | 1 |
| COVID-19 > 30 days prior to index date | Any | N/A | End of Patient History | -31 | N/A | 1 |
| COVID-19 within 7 days after index date | Any | N/A | 1 | 7 | N/A | 1 |
| COVID-19 8-14 days after index date | Any | N/A | 8 | 14 | N/A | 1 |
| COVID-19 >14 days after index date | Any | N/A | 15 | End of Patient History | N/A | 1 |

Appendix H. Specifications Defining Baseline Characteristics in this Request

| Baseline Characteristics | | | | | | |
|---|---------------------------|------------------------------|--------------------------------|------------------------------|---|--|
| Covariate | Care Setting ¹ | Principal Diagnosis Position | Evaluation Period Start (Days) | Evaluation Period End (Days) | Exclude Evidence of Days Supply if Covariate Includes Dispensings | Number of Instances the Covariate Should be Found in Evaluation Period |
| COVID-19 diagnosis only, on or anytime prior to index date | Any | N/A | End of Patient History | 0 | N/A | 1 |
| COVID-19 positive test only, on or anytime prior to index date | Any | N/A | End of Patient History | 0 | N/A | 1 |
| COVID-19 diagnosis AND positive test, on or anytime prior to index date | Any | N/A | End of Patient History | 0 | N/A | 1 |
| Neither COVID-19 diagnosis nor test, on or anytime prior to index date | Any | N/A | End of Patient History | 0 | N/A | 1 |
| COVID-19 diagnosis only, within five-day EUA timeframe | Any | N/A | -5 | 0 | N/A | 1 |
| COVID-19 positive test only, within five-day EUA timeframe | Any | N/A | -5 | 0 | N/A | 1 |
| COVID-19 diagnosis AND positive test, within five-day EUA timeframe | Any | N/A | -5 | 0 | N/A | 1 |
| Neither COVID-19 diagnosis nor test, within five-day EUA timeframe | Any | N/A | -5 | 0 | N/A | 1 |
| Users with any outpatient claim, within five-day EUA timeframe | Any | N/A | -5 | 0 | N/A | 1 |
| Users with non-ED visit, within five-day EUA timeframe | Any | N/A | -5 | 0 | N/A | 1 |
| Users with ED visit, within five-day EUA timeframe | Any | N/A | -5 | 0 | N/A | 1 |

Appendix H. Specifications Defining Baseline Characteristics in this Request

| Baseline Characteristics | | | | | | |
|--|---------------------------|------------------------------|--------------------------------|------------------------------|---|--|
| Covariate | Care Setting ¹ | Principal Diagnosis Position | Evaluation Period Start (Days) | Evaluation Period End (Days) | Exclude Evidence of Days Supply if Covariate Includes Dispensings | Number of Instances the Covariate Should be Found in Evaluation Period |
| COVID-19 diagnosis only, within seven-day EUA timeframe | Any | N/A | -7 | 0 | N/A | 1 |
| COVID-19 positive test only, within seven-day EUA timeframe | Any | N/A | -7 | 0 | N/A | 1 |
| COVID-19 diagnosis AND positive test, within seven-day EUA timeframe | Any | N/A | -7 | 0 | N/A | 1 |
| Neither COVID-19 diagnosis nor test, within seven-day EUA timeframe | Any | N/A | -7 | 0 | N/A | 1 |
| Users with any outpatient claim, within seven-day EUA timeframe | Any | N/A | -7 | 0 | N/A | 1 |
| Users with non-ED visit, within seven-day EUA timeframe | Any | N/A | -7 | 0 | N/A | 1 |
| Users with ED visit, within seven-day EUA timeframe | Any | N/A | -7 | 0 | N/A | 1 |
| COVID-19 on the same day as index date | IP | N/A | 0 | 0 | N/A | 1 |
| COVID-19 1-2 day prior to index date | IP | N/A | -2 | -1 | N/A | 1 |
| COVID-19 3-5 day prior to index date | IP | N/A | -5 | -3 | N/A | 1 |
| COVID-19 6-7 days prior to index date | IP | N/A | -7 | -6 | N/A | 1 |

Appendix H. Specifications Defining Baseline Characteristics in this Request

| Baseline Characteristics | | | | | | | |
|---|---------------------------|------------------------------|--------------------------------|------------------------------|---|--|--|
| Covariate | Care Setting ¹ | Principal Diagnosis Position | Evaluation Period Start (Days) | Evaluation Period End (Days) | Exclude Evidence of Days Supply if Covariate Includes Dispensings | Number of Instances the Covariate Should be Found in Evaluation Period | |
| COVID-19 8-14 days prior to index date | IP | N/A | -14 | -8 | N/A | 1 | |
| COVID-19 15-30 days prior to index date | IP | N/A | -30 | -15 | N/A | 1 | |
| COVID-19 > 30 days prior to index date | IP | N/A | End of Patient History | -31 | N/A | 1 | |
| COVID-19 within 7 days after index date | IP | N/A | 1 | 7 | | | |
| COVID-19 8-14 days after index date | IP | N/A | 8 | 14 | | | |
| COVID-19 >14 days after index date | IP | N/A | 15 | End of Patient History | | | |
| COVID-19 on the same day as index date | AV, OA, ED | N/A | 0 | 0 | N/A | 1 | |
| COVID-19 1-2 day prior to index date | AV, OA, ED | N/A | -2 | -1 | N/A | 1 | |
| COVID-19 3-5 day prior to index date | AV, OA, ED | N/A | -5 | -3 | N/A | 1 | |
| COVID-19 6-7 days prior to index date | AV, OA, ED | N/A | -7 | -6 | N/A | 1 | |
| COVID-19 8-14 days prior to index date | AV, OA, ED | N/A | -14 | -8 | N/A | 1 | |
| COVID-19 15-30 days prior to index date | AV, OA, ED | N/A | -30 | -15 | N/A | 1 | |
| COVID-19 > 30 days prior to index date | AV, OA, ED | N/A | End of Patient History | -31 | N/A | 1 | |
| COVID-19 within 7 days after index date | AV, OA, ED | N/A | 1 | 7 | | | |

Appendix H. Specifications Defining Baseline Characteristics in this Request

| Baseline Characteristics | | | | | | |
|---|---------------------------|------------------------------|--------------------------------|------------------------------|---|--|
| Covariate | Care Setting ¹ | Principal Diagnosis Position | Evaluation Period Start (Days) | Evaluation Period End (Days) | Exclude Evidence of Days Supply if Covariate Includes Dispensings | Number of Instances the Covariate Should be Found in Evaluation Period |
| COVID-19 8-14 days after index date | AV, OA, ED | N/A | 8 | 14 | | |
| COVID-19 >14 days after index date | AV, OA, ED | N/A | 15 | End of Patient History | | |
| High Risk criteria with conclusive evidence | Any | Any | -183 | 0 | N/A | 1 |
| High Risk criteria with suggestive evidence | Any | Any | -183 | 0 | N/A | 1 |
| High Risk criteria with mixed evidence | Any | Any | -183 | 0 | N/A | 1 |
| Obesity | Any | Any | -183 | 0 | N/A | 1 |
| Pregnancy | Any | Any | -183 | 0 | N/A | 1 |
| Chronic Kidney Disease | Any | Any | -183 | 0 | N/A | 1 |
| Diabetes | Any | Any | -183 | 0 | N/A | 1 |
| Immunosuppressant Disease or Treatment (DX, PX, or RX) ² | Any | Any | -183 | 0 | N/A | 1 |
| Cardiovascular (including Congenital Heart Disease) | Any | Any | -183 | 0 | N/A | 1 |
| Interstitial lung disease | Any | Any | -183 | 0 | N/A | 1 |
| Chronic Obstructive Pulmonary Disease (COPD) | Any | Any | -183 | 0 | N/A | 1 |

Appendix H. Specifications Defining Baseline Characteristics in this Request

| Baseline Characteristics | | | | | | |
|---|---------------------------|------------------------------|--------------------------------|------------------------------|---|--|
| Covariate | Care Setting ¹ | Principal Diagnosis Position | Evaluation Period Start (Days) | Evaluation Period End (Days) | Exclude Evidence of Days Supply if Covariate Includes Dispensings | Number of Instances the Covariate Should be Found in Evaluation Period |
| Pulmonary Hypertension or Pulmonary Embolism | Any | Any | -183 | 0 | N/A | 1 |
| Sickle Cell Disease | Any | Any | -183 | 0 | N/A | 1 |
| Bronchiectasis | Any | Any | -183 | 0 | N/A | 1 |
| Cancer | Any | Any | -183 | 0 | N/A | 1 |
| Cerebrovascular disease | Any | Any | -183 | 0 | N/A | 1 |
| Congenital heart disease | Any | Any | -183 | 0 | N/A | 1 |
| Chronic liver disease (cirrhosis, non-alcoholic fatty liver disease, alcoholic liver disease, autoimmune hepatitis) | Any | Any | -183 | 0 | N/A | 1 |
| Cystic fibrosis | Any | Any | -183 | 0 | N/A | 1 |
| Human Immunodeficiency Virus (HIV) | Any | Any | -183 | 0 | N/A | 1 |
| Mental health conditions (such as mood disorders, including depression, and schizophrenia spectrum disorders) | Any | Any | -183 | 0 | N/A | 1 |
| Dementia | Any | Any | -183 | 0 | N/A | 1 |
| Smoking, current and former | Any | Any | -183 | 0 | N/A | 1 |

Appendix H. Specifications Defining Baseline Characteristics in this Request

| Baseline Characteristics | | | | | | |
|---|---------------------------|------------------------------|--------------------------------|------------------------------|---|--|
| Covariate | Care Setting ¹ | Principal Diagnosis Position | Evaluation Period Start (Days) | Evaluation Period End (Days) | Exclude Evidence of Days Supply if Covariate Includes Dispensings | Number of Instances the Covariate Should be Found in Evaluation Period |
| Solid organ or blood stem cell transplantation | Any | Any | -183 | 0 | N/A | 1 |
| Tuberculosis | Any | Any | -183 | 0 | N/A | 1 |
| Overweight | Any | Any | -183 | 0 | N/A | 1 |
| Substance use disorders | Any | Any | -183 | 0 | N/A | 1 |
| Thalassemia | Any | Any | -183 | 0 | N/A | 1 |
| Alpha 1 antitrypsin deficiency | Any | Any | -183 | 0 | N/A | 1 |
| Reactive airway and other respiratory diseases | Any | Any | -183 | 0 | N/A | 1 |
| Asthma | Any | Any | -183 | 0 | N/A | 1 |
| Hepatitis B | Any | Any | -183 | 0 | N/A | 1 |
| Hepatitis C | Any | Any | -183 | 0 | N/A | 1 |
| Hypertension | Any | Any | -183 | 0 | N/A | 1 |
| Potent (Cytochrome P450 3A) CYP3A Inducers* in the prior three months | Any | Any | -90 | -1 | N/A | 1 |
| Potent CYP3A Inducers* in the prior month | Any | Any | -30 | -1 | N/A | 1 |

Appendix H. Specifications Defining Baseline Characteristics in this Request

| Baseline Characteristics | | | | | | |
|---|---------------------------|------------------------------|--------------------------------|------------------------------|---|--|
| Covariate | Care Setting ¹ | Principal Diagnosis Position | Evaluation Period Start (Days) | Evaluation Period End (Days) | Exclude Evidence of Days Supply if Covariate Includes Dispensings | Number of Instances the Covariate Should be Found in Evaluation Period |
| Concomitant Potent CYP3A Inducers* | Any | Any | -7 | 0 | N/A | 1 |
| Other CYP3A Inducers** in the prior three months | Any | Any | -90 | -1 | N/A | 1 |
| Other CYP3A Inducers** in the prior month | Any | Any | -30 | -1 | N/A | 1 |
| Concomitant Other CYP3A Inducers** | Any | Any | -7 | 0 | N/A | 1 |
| Drugs dependent on CYP3A for clearance*** in the prior three months | Any | Any | -90 | -1 | N/A | 1 |
| Drugs dependent on CYP3A for clearance*** in the prior month | Any | Any | -30 | -1 | N/A | 1 |
| Concomitant Drugs dependent on CYP3A for clearance*** | Any | Any | -7 | 0 | N/A | 1 |
| Other drug-drug interactors**** in the prior three months | Any | Any | -90 | -1 | N/A | 1 |
| Other drug-drug interactors**** in the prior month | Any | Any | -30 | -1 | N/A | 1 |
| Concomitant Other drug-drug interactors**** | Any | Any | -7 | 0 | N/A | 1 |
| Paxlovid (Nirmatrelvir+ritonavir) | AV, OA, ED | N/A | -14 | -1 | | 1 |

Appendix H. Specifications Defining Baseline Characteristics in this Request

| Baseline Characteristics | | | | | | |
|--|---------------------------|------------------------------|--------------------------------|------------------------------|---|--|
| Covariate | Care Setting ¹ | Principal Diagnosis Position | Evaluation Period Start (Days) | Evaluation Period End (Days) | Exclude Evidence of Days Supply if Covariate Includes Dispensings | Number of Instances the Covariate Should be Found in Evaluation Period |
| Sotrovimab | AV, OA, ED | N/A | -14 | -1 | | 1 |
| Bebtelovimab | AV, OA, ED | N/A | -14 | -1 | | 1 |
| Molnupiravir | AV, OA, ED | N/A | -14 | -1 | | 1 |
| Remdesivir | AV, OA, ED | N/A | -14 | -1 | | 1 |
| Bamlanivimab + Etesevimab | AV, OA, ED | N/A | -14 | -1 | | 1 |
| Casirivimab + Imdevimab | AV, OA, ED | N/A | -14 | -1 | | 1 |
| Paxlovid (Nirmatrelvir + ritonavir) | AV, OA, ED | N/A | -30 | -15 | | 1 |
| Sotrovimab | AV, OA, ED | N/A | -30 | -15 | | 1 |
| Bebtelovimab | AV, OA, ED | N/A | -30 | -15 | | 1 |
| Molnupiravir | AV, OA, ED | N/A | -30 | -15 | | 1 |
| Remdesivir | AV, OA, ED | N/A | -30 | -15 | | 1 |
| Bamlanivimab + Etesevimab | AV, OA, ED | N/A | -30 | -15 | | 1 |
| Casirivimab + Imdevimab | AV, OA, ED | N/A | -30 | -15 | | 1 |

Appendix H. Specifications Defining Baseline Characteristics in this Request

| Baseline Characteristics | | | | | | |
|-------------------------------------|---------------------------|------------------------------|--------------------------------|------------------------------|---|--|
| Covariate | Care Setting ¹ | Principal Diagnosis Position | Evaluation Period Start (Days) | Evaluation Period End (Days) | Exclude Evidence of Days Supply if Covariate Includes Dispensings | Number of Instances the Covariate Should be Found in Evaluation Period |
| Paxlovid (Nirmatrelvir + ritonavir) | AV, OA, ED | N/A | 1 | 14 | | 1 |
| Sotrovimab | AV, OA, ED | N/A | 1 | 14 | | 1 |
| Bebtelovimab | AV, OA, ED | N/A | 1 | 14 | | 1 |
| Molnupiravir | AV, OA, ED | N/A | 1 | 14 | | 1 |
| Remdesivir | AV, OA, ED | N/A | 1 | 14 | | 1 |
| Bamlanivimab + Etesevimab | AV, OA, ED | N/A | 1 | 14 | | 1 |
| Casirivimab + Imdevimab | AV, OA, ED | N/A | 1 | 14 | | 1 |
| Paxlovid (Nirmatrelvir + ritonavir) | AV, OA, ED | N/A | 15 | 30 | | 1 |
| Sotrovimab | AV, OA, ED | N/A | 15 | 30 | | 1 |
| Bebtelovimab | AV, OA, ED | N/A | 15 | 30 | | 1 |
| Molnupiravir | AV, OA, ED | N/A | 15 | 30 | | 1 |
| Remdesivir | AV, OA, ED | N/A | 15 | 30 | | 1 |
| Bamlanivimab + Etesevimab | AV, OA, ED | N/A | 15 | 30 | | 1 |
| Casirivimab + Imdevimab | AV, OA, ED | N/A | 15 | 30 | | 1 |

Appendix H. Specifications Defining Baseline Characteristics in this Request

| Baseline Characteristics | | | | | | |
|--------------------------|---------------------------|------------------------------|--------------------------------|------------------------------|---|--|
| Covariate | Care Setting ¹ | Principal Diagnosis Position | Evaluation Period Start (Days) | Evaluation Period End (Days) | Exclude Evidence of Days Supply if Covariate Includes Dispensings | Number of Instances the Covariate Should be Found in Evaluation Period |

¹AV = Ambulatory Visit, OA = Other Ambulatory Visit, IP = Inpatient Visit, ED = Emergency Department Visit

²DX = Diagnosis Code, PX = Procedure Code, RX = Drug Code

*Potent CYP3A Inducers: apalutamide, carbamazepine, phenobarbital, phenytoin, rifampin, and St. John's wart

**Other CYP3A inducers: efavirenz, nevirapine, rifabutin, betamethasone, budesonide, ciclesonide, dexamethasone, fluticasone, methylprednisolone, mometasone, prednisone, and triamcinolone

***Drugs dependent on CYP3A for clearance: alfuzosin, pethidine, propoxyphene, ranolazine, amiodarone, dronedarone, flecainide, propafenone, quinidine, colchicine, lurasidone, pimozide, clozapine, dihydroergotamine, ergotamine, methylegonovine, lovastatin, simvastatin, sildenafil, triazolam, and oral midazolam

****Other Drug/Drug Interactors: All other drugs in Table 1 of FDA's fact sheet

Appendix I. Specifications Defining Combinations in this Request

| Combinations | | | | | | |
|--|------------|-------------------------|--------------------------------|---|--|--|
| Combination Description | Combo Name | Combo Code Component(s) | Combination Date | Code Type | Encounter Type for Each Combination Component | Principal Diagnosis for Each Combination Component |
| COVID positive lab (to be used in the COVID in any care setting baseline characteristics) | COVLAB | COVLAB | First code to occur | Lab (Coded as procedure code (PX) for baseline table) | Any (Inpatient, Emergency Department, Outpatient, Home, Unknown) | N/A |
| Inpatient COVID positive lab (to be used in the COVID in Inpatient care setting baseline characteristics) | IPCOV | IPCOV | First code to occur | Lab (Coded as PX for baseline table) | Inpatient | N/A |
| Outpatient COVID positive lab (to be used in the COVID in Outpatient care setting baseline characteristics) | OPCOV | OPCOV | First code to occur | Lab (Coded as PX for baseline table) | Outpatient | N/A |
| Same-Day Inpatient Bamlanivimab and Etesevimab (NDC code in PX table or ICD 10 PX code)* | IPBEPX | IPBAPX, IPETPX | First code to occur (same day) | PX | Inpatient; Emergency Department | Only applicable for Inpatient and Institutional stays: Any |
| Same-Day Outpatient Bamlanivimab and Etesevimab (NDC code in PX table or ICD 10 PX code)* | OPBEPX | OPBAPX, OPETPX | First code to occur (same day) | PX | Ambulatory Visit; Other Ambulatory; Emergency Department | N/A |
| Same-Day Outpatient Bamlanivimab and Etesevimab (NDC code)* | BENDC | BAMNDC, ETENDC | First code to occur (same day) | PX | N/A | N/A |

*NDC = National Drug Codes, ICD-10 = International Classification of Diseases, Tenth Revision