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The following report(s) provides findings from an FDA-initiated query using Sentinel. While Sentinel queries may be undertaken to assess potential medical product safety risks, they may also be initiated for various other reasons. Some examples include determining a rate or count of an identified health outcome of interest, examining medical product use, exploring the feasibility of future, more detailed analyses within Sentinel, and seeking to better understand Sentinel capabilities.

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_mpl1p_wp080

Request ID: cder_mpl1p_wp080_nsdv_v02

Request Description: In this report we examine and characterize new users of the six most commonly utilized beta blockers among the pediatric population in the Sentinel Distributed Database (SDD). This query is a follow up analysis of requests, cder_mpl1p_wp061 and cder_mpl1p_wp069.

Sentinel Routine Querying Module: Cohort Identification and Descriptive Analysis (CIDA) module, version 12.1.2, with custom programming, was executed for this request.

Data Source: We distributed this request to five Sentinel Data Partners on August 21, 2023. These five Data Partners are a subset of the SDD. Data from commercially insured and Medicaid patients having both medical coverage and drug coverage are included. The study period is from January 1, 2008 through February 28, 2023. Please see Appendix A for a list of dates of available data for each Data Partner.

Study Design: We identified individuals ages 0-17 years with evidence of a new beta blocker dispensing during the study period. Individuals were excluded if they had evidence of exposure to any beta blocker in the prior six months. Please refer to Appendix C for the generic names of the medical products used to define exclusions in this request. Only the most commonly utilized beta blockers (atenolol, carvedilol, labetalol, metoprolol, nadolol, or propranolol) were assessed. These commonly utilized beta blockers were identified from request cder_mpl1p_wp069_nsdv_v01.

Cohorts were created for each medical product exposure. Additional cohorts were created to assess metoprolol and propranolol by form (metoprolol regular, metoprolol extended release, propranolol regular, propranolol extended release, propranolol hemangeol). One cohort was added to assess exposure to any of the commonly utilized beta blockers regardless of product (top beta blockers).

For additional details about the study design, please refer to Appendix G for the technical specifications and Appendix H for the design diagram.

This is a Type 2 analysis in the Query Request Package (QRP) documentation.

Exposure of Interest: We defined the exposures of interest, the most commonly utilized beta blockers, as all valid outpatient dispensings of each beta blocker of interest using NDCs. Please refer to Appendix B for generic names of the medical products used to define exposures in this request. Please refer to Appendix D for generic names of the medical products used to define exclusions in this request.

Outcome of Interest: We defined the outcome of interest as hypoglycemia. Please refer to Appendix C for a list of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes used to define hypoglycemia in this request.

Cohort Eligibility Criteria: To be included in this query, we required individuals to be continuously enrolled in health plans with medical and drug coverage for at least 183 days prior to their first valid outpatient dispensing (index). For patients less than six months of age, individuals were required to have continuous medical and drug coverage since birth. Gaps in coverage of up to 45 days were allowed. Age groups of interest included 0-1, 2-5, 6-12, and 13-17 years. Eligible individuals had at least one qualifying new beta blocker dispensing during the study period. New use was defined as no prior beta blocker dispensing in the 183 days prior to index date (or no prior beta blocker dispensings since birth for patients under six months of age). For the cohort assessing use of the top beta blockers, switching between products was permitted.

Follow-up Time: We created exposure episodes based on the number of days supplied per beta blocker dispensing using outpatient pharmacy dispensing data. Treatment episodes were bridged if the gap between dispensings were 50% or less than the prior dispensing's days supply and episodes were extended by 50% of the last dispensing's days supply. Follow-up began on the day of the index dispensing and continued until the first occurrence of any of the following: 1) disenrollment; 2) death; 3) the end of the data provided by each Data Partner; 4) the end of the query period; 5) the end of the treatment episode; or 6) a hypoglycemic event. For cohorts examining single beta blocker products, use of any other beta blocker product would also end follow-up. For the cohort assessing use of the top beta blockers, switching between beta blockers did not result in censoring.

Overview for Request: cder_mpl1p_wp080

Health Characteristics: We assessed the following characteristics on the day an individual was dispensed the beta blocker of interest (index date): age, year, sex, and Charlson/Elixhauser combined comorbidity score¹.

The following characteristics were also assessed during the time windows specified below:

- 183 days prior through day before index date: Diagnosis of hypoglycemia.
- 183 days prior through index date: Diagnosis of diabetes, insulin use, chronic kidney disease, and chronic liver disease.
- 90 days prior through index date: Diagnosis of hypertension, hemangioma, heart failure, congenital heart disease, atrial fibrillation, long QT syndrome, other cardiac arrhythmias, cardiac arrhythmias (composite), pulmonary hypertension, cardiomyopathy, coronary artery disease, portal hypertension, anxiety disorder, tremor, migraine, thyrotoxicosis, burns, glaucoma, autism, Marfan's syndrome, pheocromocytoma/paranglioma, any of the above health characteristics, and none of the above health characteristics.

Additional tables were added to this report to characterize the subset of individuals within each cohort who experience a hypoglycemic event during beta blocker exposure (Tables 1m-1x). These tables include an additional section that assess the care setting where the hypoglycemic diagnosis was recorded. Care settings include Ambulatory Visit, Other Ambulatory Visit, Emergency Department, Inpatient Stay (Primary Diagnosis), Inpatient Stay (Other Diagnosis position), and Non-Acute Institutional Stay.

Please refer to Appendix E for a list of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes used to define covariates in this request. Please refer to Appendix F for a list of generic and brand names of medical products used to define covariates in this request.

Limitations: Algorithms used to define exposures and inclusion and exclusion criteria are imperfect; thus, it is possible that there may be misclassification. Therefore, data should be interpreted with these limitations in mind.

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

¹ Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A combined comorbidity score predicted mortality in elderly patients better than existing scores. J Clin Epidemiol. 2011;64(7):749-759

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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

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 Members who Use Top Beta Blockers in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Characteristics ¹	Number	
Number of Unique patients	244,266	
Number of Episodes	262,099	
Demographic Characteristics	Mean	Standard Deviation
Age (Years)	12.4	5.7
Age	Number	Percent
0-1 years	36,722	14.0%
2-5 years	7,704	2.9%
6-12 years	49,858	19.0%
13-17 years	167,815	64.0%
Sex		
Female	148,911	61.0%
Male	95,355	39.0%
Race ²		
American Indian or Alaska Native	2,530	1.0%
Asian	2,340	1.0%
Black or African American	16,528	6.8%
Multi-racial	1,283	0.5%
Native Hawaiian or Other Pacific Islander	433	0.2%
Unknown	149,688	61.3%
White	71,464	29.3%
Hispanic origin		
Yes	29,497	12.1%
No	90,489	37.0%
Unknown	124,280	50.9%
Year		
2008	4,601	1.8%
2009	6,274	2.4%
2010	6,084	2.3%
2011	5,892	2.2%
2012	5,800	2.2%
2013	6,403	2.4%
2014	10,720	4.1%
2015	18,762	7.2%
2016	30,695	11.7%
2017	35,207	13.4%
2018	36,273	13.8%
2019	39,713	15.2%
2020	36,273	13.8%
2021	9,291	3.5%
2022	9,159	3.5%
2023	952	0.4%

Table 1a. Aggregated Characteristics of Members who Use Top Beta Blockers in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	0.6	1.1
Hypertension	17,028	6.5%
Hemangioma	20,683	7.9%
Heart Failure	4,046	1.5%
Congenital Heart Disease	22,418	8.6%
Atrial Fibrillation	669	0.3%
Long QT Syndrome	3,202	1.2%
Other Cardiac Arrhythmia	44,938	17.1%
Cardiac Arrhythmia (Composite)	46,946	17.9%
Pulmonary Hypertension	1,636	0.6%
Cardiomyopathy	4,735	1.8%
Coronary Artery Disease	1,060	0.4%
Portal Hypertension	371	0.1%
Anxiety	62,016	23.7%
Tremor	5,134	2.0%
Migraine	51,779	19.8%
Thyrotoxicosis	7,401	2.8%
Burns	618	0.2%
Glaucoma	599	0.2%
Autism	9,931	3.8%
Marfan's Syndrome	1,213	0.5%
Pheochromocytoma/Paraganglioma	144	0.1%
Any Health Characteristic Above	191,999	73.3%
None of Health Characteristics Above	70,100	26.7%
Diabetes	2,693	1.0%
Insulin	4,396	1.7%
Chronic Kidney Disease	8,839	3.4%
Chronic Liver Disease	3,948	1.5%
Hypoglycemia	3,983	1.5%

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

Table 1b. Aggregated Characteristics of Members who Use Any Metoprolol in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics ¹		Number	
Number of Unique patients		21,144	
Number of Episodes		22,235	
Demographic Characteristics		Mean	Standard Deviation
Age (years)		14.8	3.2
Age		Number	Percent
0-1 years		212	1.0%
2-5 years		455	2.0%
6-12 years		3,720	16.7%
13-17 years		17,848	80.3%
Sex			
Female		11,660	55.1%
Male		9,484	44.9%
Race ²			
American Indian or Alaska Native		186	0.9%
Asian		223	1.1%
Black or African American		1,787	8.5%
Multi-racial		97	0.5%
Native Hawaiian or Other Pacific Islander		41	0.2%
Unknown		12,638	59.8%
White		6,172	29.2%
Hispanic origin			
Yes		2,527	12.0%
No		8,213	38.8%
Unknown		10,404	49.2%
Year			
2008		552	2.5%
2009		667	3.0%
2010		637	2.9%
2011		576	2.6%
2012		549	2.5%
2013		578	2.6%
2014		885	4.0%
2015		1,532	6.9%
2016		2,394	10.8%
2017		3,181	14.3%
2018		3,159	14.2%
2019		3,219	14.5%
2020		3,060	13.8%
2021		620	2.8%
2022		567	2.6%
2023		59	0.3%

Table 1b. Aggregated Characteristics of Members who Use Any Metoprolol in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	0.8	1.4
Hypertension	4,415	19.9%
Hemangioma	14	0.1%
Heart Failure	528	2.4%
Congenital Heart Disease	2,154	9.7%
Atrial Fibrillation	229	1.0%
Long QT Syndrome	184	0.8%
Other Cardiac Arrhythmia	8,324	37.4%
Cardiac Arrhythmia (Composite)	8,434	37.9%
Pulmonary Hypertension	151	0.7%
Cardiomyopathy	976	4.4%
Coronary Artery Disease	344	1.5%
Portal Hypertension	23	0.1%
Anxiety	3,684	16.6%
Tremor	162	0.7%
Migraine	2,788	12.5%
Thyrotoxicosis	345	1.6%
Burns	35	0.2%
Glaucoma	63	0.3%
Autism	577	2.6%
Marfan's Syndrome	145	0.7%
Pheochromocytoma/Paraganglioma	12	0.1%
Any Health Characteristic Above	16,556	74.5%
None of Health Characteristics Above	5,679	25.5%
Diabetes	523	2.4%
Insulin	588	2.6%
Chronic Kidney Disease	1,162	5.2%
Chronic Liver Disease	515	2.3%
Hypoglycemia	175	0.8%

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

Table 1c. Aggregated Characteristics of Members who Use Any Propranolol in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

January 1, 2008 to February 28, 2023

Patient Characteristics ¹		Number	
Number of Unique patients		174,771	
Number of Episodes		185,483	
Demographic Characteristics		Mean	Standard Deviation
Age (years)		11.9	6.1
Age		Number	Percent
0-1 years		34,045	18.4%
2-5 years		4,118	2.2%
6-12 years		31,240	16.8%
13-17 years		116,080	62.6%
Sex			
Female		109,544	62.7%
Male		65,227	37.3%
Race ²			
American Indian or Alaska Native		1,869	1.1%
Asian		1,525	0.9%
Black or African American		9,809	5.6%
Multi-racial		957	0.5%
Native Hawaiian or Other Pacific Islander		287	0.2%
Unknown		106,778	61.1%
White		53,546	30.6%
Hispanic origin			
Yes		20,033	11.5%
No		64,901	37.1%
Unknown		89,837	51.4%
Year			
2008		2,718	1.5%
2009		3,667	2.0%
2010		3,666	2.0%
2011		3,726	2.0%
2012		3,748	2.0%
2013		4,202	2.3%
2014		7,425	4.0%
2015		12,963	7.0%
2016		21,325	11.5%
2017		24,990	13.5%
2018		26,229	14.1%
2019		28,819	15.5%
2020		26,333	14.2%
2021		7,453	4.0%
2022		7,451	4.0%
2023		768	0.4%

Table 1c. Aggregated Characteristics of Members who Use Any Propranolol in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	0.5	0.9
Hypertension	4,687	2.5%
Hemangioma	20,374	11.0%
Heart Failure	1,483	0.8%
Congenital Heart Disease	12,982	7.0%
Atrial Fibrillation	156	0.1%
Long QT Syndrome	1,137	0.6%
Other Cardiac Arrhythmia	19,289	10.4%
Cardiac Arrhythmia (Composite)	19,918	10.7%
Pulmonary Hypertension	980	0.5%
Cardiomyopathy	1,027	0.6%
Coronary Artery Disease	266	0.1%
Portal Hypertension	255	0.1%
Anxiety	52,582	28.3%
Tremor	4,585	2.5%
Migraine	42,936	23.1%
Thyrotoxicosis	3,027	1.6%
Burns	508	0.3%
Glaucoma	393	0.2%
Autism	8,204	4.4%
Marfan's Syndrome	110	0.1%
Pheochromocytoma/Paraganglioma	80	0.0%
Any Health Characteristic Above	135,853	73.2%
None of Health Characteristics Above	49,630	26.8%
Diabetes	1,298	0.7%
Insulin	2,485	1.3%
Chronic Kidney Disease	3,528	1.9%
Chronic Liver Disease	2,001	1.1%
Hypoglycemia	3,309	1.8%

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

Table 1d. Aggregated Characteristics of Members who Use Metoprolol Extended Release in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics ¹		Number	
Number of Unique patients		12,618	
Number of Episodes		13,163	
Demographic Characteristics		Mean	Standard Deviation
Age (years)		15.1	2.8
Age		Number	Percent
0-1 years		55	0.4%
2-5 years		144	1.1%
6-12 years		2,031	15.4%
13-17 years		10,933	83.1%
Sex			
Female		6,990	55.4%
Male		5,628	44.6%
Race ²			
American Indian or Alaska Native		92	0.7%
Asian		136	1.1%
Black or African American		1,040	8.2%
Multi-racial		57	0.5%
Native Hawaiian or Other Pacific Islander		28	0.2%
Unknown		7,659	60.7%
White		3,606	28.6%
Hispanic origin			
Yes		1,415	11.2%
No		4,767	37.8%
Unknown		6,436	51.0%
Year			
2008		384	2.9%
2009		368	2.8%
2010		383	2.9%
2011		350	2.7%
2012		345	2.6%
2013		359	2.7%
2014		504	3.8%
2015		840	6.4%
2016		1,283	9.7%
2017		1,827	13.9%
2018		1,869	14.2%
2019		1,912	14.5%
2020		1,881	14.3%
2021		422	3.2%
2022		395	3.0%
2023		41	0.3%

Table 1d. Aggregated Characteristics of Members who Use Metoprolol Extended Release in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	0.7	1.3
Hypertension	2,670	20.3%
Hemangioma	*****	*****
Heart Failure	248	1.9%
Congenital Heart Disease	1,143	8.7%
Atrial Fibrillation	137	1.0%
Long QT Syndrome	89	0.7%
Other Cardiac Arrhythmia	4,998	38.0%
Cardiac Arrhythmia (Composite)	5,055	38.4%
Pulmonary Hypertension	81	0.6%
Cardiomyopathy	567	4.3%
Coronary Artery Disease	176	1.3%
Portal Hypertension	*****	*****
Anxiety	2,193	16.7%
Tremor	79	0.6%
Migraine	1,818	13.8%
Thyrotoxicosis	183	1.4%
Burns	16	0.1%
Glaucoma	41	0.3%
Autism	301	2.3%
Marfan's Syndrome	95	0.7%
Pheochromocytoma/Paraganglioma	*****	*****
Any Health Characteristic Above	9,942	75.5%
None of Health Characteristics Above	3,221	24.5%
Diabetes	285	2.2%
Insulin	343	2.6%
Chronic Kidney Disease	557	4.2%
Chronic Liver Disease	266	2.0%
Hypoglycemia	89	0.7%

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

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Table 1e. Aggregated Characteristics of Members who Use Metoprolol Regular in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics ¹		Number	
Number of Unique patients		8,656	
Number of Episodes		9,100	
Demographic Characteristics		Mean	Standard Deviation
Age (Years)		14.4	3.7
Age		Number	Percent
0-1 years		157	1.7%
2-5 years		312	3.4%
6-12 years		1,692	18.6%
13-17 years		6,939	76.3%
Sex			
Female		4,739	54.7%
Male		3,917	45.3%
Race ²			
American Indian or Alaska Native		96	1.1%
Asian		89	1.0%
Black or African American		755	8.7%
Multi-racial		40	0.5%
Native Hawaiian or Other Pacific Islander		13	0.2%
Unknown		5,061	58.5%
White		2,602	30.1%
Hispanic origin			
Yes		1,137	13.1%
No		3,492	40.3%
Unknown		4,027	46.5%
Year			
2008		169	1.9%
2009		301	3.3%
2010		256	2.8%
2011		226	2.5%
2012		205	2.3%
2013		220	2.4%
2014		383	4.2%
2015		694	7.6%
2016		1,113	12.2%
2017		1,354	14.9%
2018		1,293	14.2%
2019		1,311	14.4%
2020		1,184	13.0%
2021		200	2.2%
2022		173	1.9%
2023		18	0.2%

Table 1e. Aggregated Characteristics of Members who Use Metoprolol Regular in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	0.9	1.5
Hypertension	1,752	19.3%
Hemangioma	*****	*****
Heart Failure	281	3.1%
Congenital Heart Disease	1,015	11.2%
Atrial Fibrillation	92	1.0%
Long QT Syndrome	95	1.0%
Other Cardiac Arrhythmia	3,341	36.7%
Cardiac Arrhythmia (Composite)	3,394	37.3%
Pulmonary Hypertension	71	0.8%
Cardiomyopathy	412	4.5%
Coronary Artery Disease	169	1.9%
Portal Hypertension	18	0.2%
Anxiety	1,495	16.4%
Tremor	83	0.9%
Migraine	972	10.7%
Thyrotoxicosis	162	1.8%
Burns	19	0.2%
Glaucoma	22	0.2%
Autism	278	3.1%
Marfan's Syndrome	50	0.5%
Pheochromocytoma/Paraganglioma	*****	*****
Any Health Characteristic Above	6,635	72.9%
None of Health Characteristics Above	2,465	27.1%
Diabetes	238	2.6%
Insulin	245	2.7%
Chronic Kidney Disease	607	6.7%
Chronic Liver Disease	250	2.7%
Hypoglycemia	86	0.9%

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

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Table 1f. Aggregated Characteristics of Members who Use Propranolol Extended Release in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics ¹		Number	
Number of Unique patients		17,731	
Number of Episodes		18,511	
Demographic Characteristics		Mean	Standard Deviation
Age (years)		15.4	2.2
Age		Number	Percent
0-1 years		*****	*****
2-5 years		*****	*****
6-12 years		2,583	14.0%
13-17 years		15,894	85.9%
Sex			
Female		11,493	64.8%
Male		6,238	35.2%
Race ²			
American Indian or Alaska Native		173	1.0%
Asian		60	0.3%
Black or African American		983	5.5%
Multi-racial		87	0.5%
Native Hawaiian or Other Pacific Islander		21	0.1%
Unknown		10,755	60.7%
White		5,652	31.9%
Hispanic origin			
Yes		1,051	5.9%
No		6,683	37.7%
Unknown		9,997	56.4%
Year			
2008		552	3.0%
2009		772	4.2%
2010		739	4.0%
2011		696	3.8%
2012		667	3.6%
2013		687	3.7%
2014		1,001	5.4%
2015		1,431	7.7%
2016		2,278	12.3%
2017		2,377	12.8%
2018		2,260	12.2%
2019		2,274	12.3%
2020		1,787	9.7%
2021		491	2.7%
2022		433	2.3%
2023		66	0.4%

Table 1f. Aggregated Characteristics of Members who Use Propranolol Extended Release in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	0.3	0.6
Hypertension	533	2.9%
Hemangioma	26	0.1%
Heart Failure	*****	*****
Congenital Heart Disease	107	0.6%
Atrial Fibrillation	*****	*****
Long QT Syndrome	47	0.3%
Other Cardiac Arrhythmia	819	4.4%
Cardiac Arrhythmia (Composite)	854	4.6%
Pulmonary Hypertension	*****	*****
Cardiomyopathy	17	0.1%
Coronary Artery Disease	*****	*****
Portal Hypertension	*****	*****
Anxiety	3,701	20.0%
Tremor	709	3.8%
Migraine	9,288	50.2%
Thyrotoxicosis	114	0.6%
Burns	27	0.1%
Glaucoma	34	0.2%
Autism	604	3.3%
Marfan's Syndrome	*****	*****
Pheochromocytoma/Paraganglioma	*****	*****
Any Health Characteristic Above	12,958	70.0%
None of Health Characteristics Above	5,553	30.0%
Diabetes	124	0.7%
Insulin	287	1.6%
Chronic Kidney Disease	136	0.7%
Chronic Liver Disease	110	0.6%
Hypoglycemia	64	0.3%

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

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Table 1g. Aggregated Characteristics of Members who Use Propranolol Regular in the Sentinel Distributed Database(SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics¹	Number	
Number of Unique patients	154,789	
Number of Episodes	163,993	
Demographic Characteristics	Mean	Standard Deviation
Age (Years)	11.8	6.2
Age	Number	Percent
0-1 years	30,632	18.7%
2-5 years	4,026	2.5%
6-12 years	28,741	17.5%
13-17 years	100,594	61.3%
Sex		
Female	96,303	62.2%
Male	58,486	37.8%
Race ²		
American Indian or Alaska Native	1,703	1.1%
Asian	1,413	0.9%
Black or African American	8,770	5.7%
Multi-racial	849	0.5%
Native Hawaiian or Other Pacific Islander	262	0.2%
Unknown	94,261	60.9%
White	47,531	30.7%
Hispanic origin		
Yes	18,635	12.0%
No	57,828	37.4%
Unknown	78,326	50.6%
Year		
2008	2,173	1.3%
2009	2,904	1.8%
2010	2,939	1.8%
2011	3,040	1.9%
2012	3,096	1.9%
2013	3,527	2.2%
2014	6,395	3.9%
2015	11,359	6.9%
2016	18,649	11.4%
2017	22,204	13.5%
2018	23,543	14.4%
2019	25,990	15.8%
2020	24,005	14.6%
2021	6,732	4.1%
2022	6,770	4.1%
2023	667	0.4%

Table 1g. Aggregated Characteristics of Members who Use Propranolol Regular in the Sentinel Distributed Database(SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	0.6	0.9
Hypertension	4,142	2.5%
Hemangioma	17,148	10.5%
Heart Failure	1,471	0.9%
Congenital Heart Disease	12,418	7.6%
Atrial Fibrillation	152	0.1%
Long QT Syndrome	1,086	0.7%
Other Cardiac Arrhythmia	18,400	11.2%
Cardiac Arrhythmia (Composite)	18,991	11.6%
Pulmonary Hypertension	964	0.6%
Cardiomyopathy	1,002	0.6%
Coronary Artery Disease	257	0.2%
Portal Hypertension	248	0.2%
Anxiety	48,998	29.9%
Tremor	3,888	2.4%
Migraine	33,933	20.7%
Thyrotoxicosis	2,914	1.8%
Burns	479	0.3%
Glaucoma	360	0.2%
Autism	7,619	4.6%
Marfan's Syndrome	102	0.1%
Pheochromocytoma/Paraganglioma	76	0.0%
Any Health Characteristic Above	120,045	73.2%
None of Health Characteristics Above	43,948	26.8%
Diabetes	1,175	0.7%
Insulin	2,202	1.3%
Chronic Kidney Disease	3,343	2.0%
Chronic Liver Disease	1,855	1.1%
Hypoglycemia	3,062	1.9%

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

Table 1h. Aggregated Characteristics of Members who Use Propranolol Hemangeol in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics¹		Number	
Number of Unique patients		3,443	
Number of Episodes		3,489	
Demographic Characteristics		Mean	Standard Deviation
Age (Years)		0.5	0.7
Age		Number	Percent
0-1 years		3,410	97.7%
2-5 years		*****	*****
6-12 years		*****	*****
13-17 years		*****	*****
Sex			
Female		2,521	73.2%
Male		922	26.8%
Race ²			
American Indian or Alaska Native		*****	*****
Asian		56	1.6%
Black or African American		117	3.4%
Multi-racial		28	0.8%
Native Hawaiian or Other Pacific Islander		*****	*****
Unknown		2,475	71.9%
White		755	21.9%
Hispanic origin			
Yes		411	11.9%
No		847	24.6%
Unknown		2,185	63.5%
Year			
2008		0	0.0%
2009		0	0.0%
2010		0	0.0%
2011		0	0.0%
2012		0	0.0%
2013		0	0.0%
2014		52	1.5%
2015		221	6.3%
2016		461	13.2%
2017		470	13.5%
2018		491	14.1%
2019		617	17.7%
2020		605	17.3%
2021		256	7.3%
2022		276	7.9%
2023		40	1.1%

Table 1h. Aggregated Characteristics of Members who Use Propranolol Hemangeol in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	0.1	0.5
Hypertension	15	0.4%
Hemangioma	3,208	91.9%
Heart Failure	*****	*****
Congenital Heart Disease	460	13.2%
Atrial Fibrillation	0	0.0%
Long QT Syndrome	*****	*****
Other Cardiac Arrhythmia	91	2.6%
Cardiac Arrhythmia (Composite)	94	2.7%
Pulmonary Hypertension	*****	*****
Cardiomyopathy	*****	*****
Coronary Artery Disease	*****	*****
Portal Hypertension	*****	*****
Anxiety	*****	*****
Tremor	*****	*****
Migraine	*****	*****
Thyrotoxicosis	*****	*****
Burns	*****	*****
Glaucoma	*****	*****
Autism	*****	*****
Marfan's Syndrome	0	0.0%
Pheochromocytoma/Paraganglioma	*****	*****
Any Health Characteristic Above	3,240	92.9%
None of Health Characteristics Above	249	7.1%
Diabetes	*****	*****
Insulin	*****	*****
Chronic Kidney Disease	51	1.5%
Chronic Liver Disease	40	1.1%
Hypoglycemia	186	5.3%

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

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Table 1i. Aggregated Characteristics of Members who Use Atenolol in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics¹		Number	
Number of Unique patients		32,739	
Number of Episodes		35,477	
Demographic Characteristics		Mean	Standard Deviation
Age (Years)		13.0	4.3
Age		Number	Percent
0-1 years		1,224	3.5%
2-5 years		1,885	5.3%
6-12 years		10,477	29.5%
13-17 years		21,891	61.7%
Sex			
Female		18,549	56.7%
Male		14,190	43.3%
Race²			
American Indian or Alaska Native		275	0.8%
Asian		407	1.2%
Black or African American		2,644	8.1%
Multi-racial		146	0.4%
Native Hawaiian or Other Pacific Islander		60	0.2%
Unknown		21,208	64.8%
White		7,999	24.4%
Hispanic origin			
Yes		4,659	14.2%
No		11,046	33.7%
Unknown		17,034	52.0%
Year			
2008		958	2.7%
2009		1,361	3.8%
2010		1,228	3.5%
2011		1,102	3.1%
2012		1,007	2.8%
2013		1,094	3.1%
2014		1,648	4.6%
2015		2,891	8.1%
2016		4,672	13.2%
2017		4,436	12.5%
2018		4,279	12.1%
2019		4,839	13.6%
2020		4,216	11.9%
2021		866	2.4%
2022		795	2.2%
2023		85	0.2%

Table 1i. Aggregated Characteristics of Members who Use Atenolol in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	0.7	1.2
Hypertension	4,304	12.1%
Hemangioma	271	0.8%
Heart Failure	383	1.1%
Congenital Heart Disease	4,583	12.9%
Atrial Fibrillation	192	0.5%
Long QT Syndrome	372	1.0%
Other Cardiac Arrhythmia	12,678	35.7%
Cardiac Arrhythmia (Composite)	12,935	36.5%
Pulmonary Hypertension	197	0.6%
Cardiomyopathy	844	2.4%
Coronary Artery Disease	156	0.4%
Portal Hypertension	18	0.1%
Anxiety	4,169	11.8%
Tremor	307	0.9%
Migraine	3,971	11.2%
Thyrotoxicosis	3,981	11.2%
Burns	47	0.1%
Glaucoma	97	0.3%
Autism	785	2.2%
Marfan's Syndrome	930	2.6%
Pheochromocytoma/Paraganglioma	15	0.0%
Any Health Characteristic Above	27,147	76.5%
None of Health Characteristics Above	8,330	23.5%
Diabetes	513	1.4%
Insulin	877	2.5%
Chronic Kidney Disease	1,513	4.3%
Chronic Liver Disease	555	1.6%
Hypoglycemia	273	0.8%

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

Table 1j. Aggregated Characteristics of Members who Use Nadolol in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics ¹		Number/Mean	
Number of Unique patients		6,614	
Number of Episodes		7,266	
Demographic Characteristics		Mean	Standard Deviation
Age (Years)		13.2	3.8
Age		Number	Percent
0-1 years		70	1.0%
2-5 years		370	5.1%
6-12 years		2,350	32.3%
13-17 years		4,476	61.6%
Sex			
Female		3,746	56.6%
Male		2,868	43.4%
Race ²			
American Indian or Alaska Native		47	0.7%
Asian		84	1.3%
Black or African American		386	5.8%
Multi-racial		31	0.5%
Native Hawaiian or Other Pacific Islander		17	0.3%
Unknown		4,565	69.0%
White		1,484	22.4%
Hispanic origin			
Yes		590	8.9%
No		1,904	28.8%
Unknown		4,120	62.3%
Year			
2008		208	2.9%
2009		348	4.8%
2010		316	4.3%
2011		296	4.1%
2012		305	4.2%
2013		342	4.7%
2014		363	5.0%
2015		518	7.1%
2016		748	10.3%
2017		845	11.6%
2018		868	11.9%
2019		926	12.7%
2020		746	10.3%
2021		205	2.8%
2022		209	2.9%
2023		23	0.3%

Table 1j. Aggregated Characteristics of Members who Use Nadolol in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	0.8	1.1
Hypertension	217	3.0%
Hemangioma	*****	*****
Heart Failure	91	1.3%
Congenital Heart Disease	576	7.9%
Atrial Fibrillation	56	0.8%
Long QT Syndrome	1,390	19.1%
Other Cardiac Arrhythmia	2,254	31.0%
Cardiac Arrhythmia (Composite)	3,228	44.4%
Pulmonary Hypertension	28	0.4%
Cardiomyopathy	225	3.1%
Coronary Artery Disease	31	0.4%
Portal Hypertension	49	0.7%
Anxiety	724	10.0%
Tremor	58	0.8%
Migraine	1,811	24.9%
Thyrotoxicosis	19	0.3%
Burns	12	0.2%
Glaucoma	14	0.2%
Autism	150	2.1%
Marfan's Syndrome	12	0.2%
Pheochromocytoma/Paraganglioma	*****	*****
Any Health Characteristic Above	5,506	75.8%
None of Health Characteristics Above	1,760	24.2%
Diabetes	58	0.8%
Insulin	106	1.5%
Chronic Kidney Disease	137	1.9%
Chronic Liver Disease	132	1.8%
Hypoglycemia	38	0.5%

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

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Table 1k. Aggregated Characteristics of Members who Use Labetalol in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics ¹		Number	
Number of Unique patients		6,374	
Number of Episodes		6,578	
Demographic Characteristics		Mean	Standard Deviation
Age (Years)		14.6	4.4
Age		Number	Percent
0-1 years		233	3.5%
2-5 years		286	4.3%
6-12 years		889	13.5%
13-17 years		5,170	78.6%
Sex			
Female		4,893	76.8%
Male		1,481	23.2%
Race ²			
American Indian or Alaska Native		94	1.5%
Asian		53	0.8%
Black or African American		1,447	22.7%
Multi-racial		33	0.5%
Native Hawaiian or Other Pacific Islander		18	0.3%
Unknown		3,150	49.4%
White		1,579	24.8%
Hispanic origin			
Yes		1,167	18.3%
No		3,168	49.7%
Unknown		2,039	32.0%
Year			
2008		93	1.4%
2009		130	2.0%
2010		140	2.1%
2011		99	1.5%
2012		83	1.3%
2013		84	1.3%
2014		224	3.4%
2015		507	7.7%
2016		903	13.7%
2017		991	15.1%
2018		975	14.8%
2019		1,051	16.0%
2020		1,149	17.5%
2021		*****	*****
2022		75	1.1%
2023		*****	*****

Table 1k. Aggregated Characteristics of Members who Use Labetalol in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	1.0	1.9
Hypertension	2,502	38.0%
Hemangioma	*****	*****
Heart Failure	89	1.4%
Congenital Heart Disease	323	4.9%
Atrial Fibrillation	*****	*****
Long QT Syndrome	34	0.5%
Other Cardiac Arrhythmia	751	11.4%
Cardiac Arrhythmia (Composite)	764	11.6%
Pulmonary Hypertension	53	0.8%
Cardiomyopathy	73	1.1%
Coronary Artery Disease	32	0.5%
Portal Hypertension	16	0.2%
Anxiety	537	8.2%
Tremor	16	0.2%
Migraine	183	2.8%
Thyrotoxicosis	29	0.4%
Burns	12	0.2%
Glaucoma	18	0.3%
Autism	78	1.2%
Marfan's Syndrome	*****	*****
Pheochromocytoma/Paraganglioma	27	0.4%
Any Health Characteristic Above	3,121	47.4%
None of Health Characteristics Above	3,457	52.6%
Diabetes	180	2.7%
Insulin	197	3.0%
Chronic Kidney Disease	1,672	25.4%
Chronic Liver Disease	332	5.0%
Hypoglycemia	77	1.2%

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

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Table 1I. Aggregated Characteristics of Members who Use Carvedilol in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics ¹		Number	
Number of Unique patients		4,678	
Number of Episodes		5,164	
Demographic Characteristics		Mean	Standard Deviation
Age (Years)		10.4	6.2
Age		Number	Percent
0-1 years		940	18.2%
2-5 years		600	11.6%
6-12 years		1,205	23.3%
13-17 years		2,419	46.8%
Sex			
Female		1,856	39.7%
Male		2,822	60.3%
Race ²			
American Indian or Alaska Native		73	1.6%
Asian		68	1.5%
Black or African American		608	13.0%
Multi-racial		26	0.6%
Native Hawaiian or Other Pacific Islander		13	0.3%
Unknown		2,675	57.2%
White		1,215	26.0%
Hispanic origin			
Yes		786	16.8%
No		1,956	41.8%
Unknown		1,936	41.4%
Year			
2008		73	1.4%
2009		102	2.0%
2010		101	2.0%
2011		94	1.8%
2012		108	2.1%
2013		106	2.1%
2014		180	3.5%
2015		356	6.9%
2016		662	12.8%
2017		785	15.2%
2018		780	15.1%
2019		877	17.0%
2020		782	15.1%
2021		83	1.6%
2022		*****	*****
2023		*****	*****

Table 11. Aggregated Characteristics of Members who Use Carvedilol in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	2.2	2.3
Hypertension	913	17.7%
Hemangioma	*****	*****
Heart Failure	1,477	28.6%
Congenital Heart Disease	1,811	35.1%
Atrial Fibrillation	35	0.7%
Long QT Syndrome	89	1.7%
Other Cardiac Arrhythmia	1,676	32.5%
Cardiac Arrhythmia (Composite)	1,704	33.0%
Pulmonary Hypertension	227	4.4%
Cardiomyopathy	1,597	30.9%
Coronary Artery Disease	231	4.5%
Portal Hypertension	*****	*****
Anxiety	340	6.6%
Tremor	*****	*****
Migraine	100	1.9%
Thyrotoxicosis	14	0.3%
Burns	*****	*****
Glaucoma	14	0.3%
Autism	139	2.7%
Marfan's Syndrome	13	0.3%
Pheochromocytoma/Paraganglioma	*****	*****
Any Health Characteristic Above	3,889	75.3%
None of Health Characteristics Above	1,275	24.7%
Diabetes	122	2.4%
Insulin	145	2.8%
Chronic Kidney Disease	834	16.2%
Chronic Liver Disease	414	8.0%
Hypoglycemia	111	2.1%

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

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Table 1m. Aggregated Characteristics of Members who Use Top Beta Blockers and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics¹		Number	
Number of Unique patients		1,118	
Number of Episodes		1,178	
Demographic Characteristics		Mean	Standard Deviation
Age (years)		9.0	7.1
Age		Number	Percent
0-1 years		407	34.6%
2-5 years		93	7.9%
6-12 years		136	11.5%
13-17 years		542	46.0%
Sex			
Female		665	59.5%
Male		453	40.5%
Race ²			
American Indian or Alaska Native		12	1.1%
Asian		*****	*****
Black or African American		112	10.0%
Multi-racial		*****	*****
Native Hawaiian or Other Pacific Islander		*****	*****
Unknown		707	63.2%
White		274	24.5%
Hispanic origin			
Yes		139	12.4%
No		399	35.7%
Unknown		580	51.9%
Year			
2008		22	1.9%
2009		26	2.2%
2010		34	2.9%
2011		*****	*****
2012		23	2.0%
2013		37	3.1%
2014		45	3.8%
2015		103	8.7%
2016		136	11.5%
2017		167	14.2%
2018		164	13.9%
2019		188	16.0%
2020		151	12.8%
2021		38	3.2%
2022		25	2.1%
2023		*****	*****

Table 1m. Aggregated Characteristics of Members who Use Top Beta Blockers and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	1.5	1.8
Hypertension	156	13.2%
Hemangioma	95	8.1%
Heart Failure	82	7.0%
Congenital Heart Disease	324	27.5%
Atrial Fibrillation	*****	*****
Long QT Syndrome	30	2.5%
Other Cardiac Arrhythmia	432	36.7%
Cardiac Arrhythmia (Composite)	443	37.6%
Pulmonary Hypertension	36	3.1%
Cardiomyopathy	86	7.3%
Coronary Artery Disease	17	1.4%
Portal Hypertension	*****	*****
Anxiety	191	16.2%
Tremor	24	2.0%
Migraine	158	13.4%
Thyrotoxicosis	38	3.2%
Burns	*****	*****
Glaucoma	*****	*****
Autism	39	3.3%
Marfan's Syndrome	*****	*****
Pheochromocytoma/Paraganglioma	*****	*****
Any Health Characteristic Above	972	82.5%
None of Health Characteristics Above	206	17.5%
Diabetes	140	11.9%
Insulin	212	18.0%
Chronic Kidney Disease	181	15.4%
Chronic Liver Disease	92	7.8%
Hypoglycemia	386	32.8%

Table 1m. Aggregated Characteristics of Members who Use Top Beta Blockers and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Hypoglycemia Diagnosis by Care Setting⁴		
Ambulatory Visit	638	54.2%
Other Ambulatory Visit ⁶	309	26.2%
Emergency Department	68	5.8%
Inpatient Hospital Stay (Primary)	26	2.2%
Inpatient Hospital Stay (Other)	174	14.8%
Non-Acute Institutional Stay	*****	*****

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

⁴An episode may be identified in more than one care setting; summed percentages may not add to 100%.

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Table 1n. Aggregated Characteristics of Members who Use Any Metoprolol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics ¹		Number	
Number of Unique patients		113	
Number of Episodes		120	
Demographic Characteristics		Mean	Standard Deviation
Age (years)		15.2	3.3
Age		Number	Percent
0-1 years		*****	*****
2-5 years		*****	*****
6-12 years		*****	*****
13-17 years		104	86.7%
Sex			
Female		80	70.8%
Male		33	29.2%
Race ²			
American Indian or Alaska Native		*****	*****
Asian		0	0.0%
Black or African American		*****	*****
Multi-racial		0	0.0%
Native Hawaiian or Other Pacific Islander		0	0.0%
Unknown		68	60.2%
White		32	28.3%
Hispanic origin			
Yes		*****	*****
No		*****	*****
Unknown		61	54.0%
Year			
2008		*****	*****
2009		*****	*****
2010		*****	*****
2011		*****	*****
2012		*****	*****
2013		*****	*****
2014		*****	*****
2015		12	10.0%
2016		14	11.7%
2017		22	18.3%
2018		*****	*****
2019		14	11.7%
2020		15	12.5%
2021		*****	*****
2022		*****	*****
2023		0	0.0%

Table 1n. Aggregated Characteristics of Members who Use Any Metoprolol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	1.0	1.5
Hypertension	35	29.2%
Hemangioma	0	0.0%
Heart Failure	0	0.0%
Congenital Heart Disease	*****	*****
Atrial Fibrillation	*****	*****
Long QT Syndrome	0	0.0%
Other Cardiac Arrhythmia	37	30.8%
Cardiac Arrhythmia (Composite)	38	31.7%
Pulmonary Hypertension	*****	*****
Cardiomyopathy	*****	*****
Coronary Artery Disease	*****	*****
Portal Hypertension	0	0.0%
Anxiety	24	20.0%
Tremor	*****	*****
Migraine	15	12.5%
Thyrotoxicosis	*****	*****
Burns	0	0.0%
Glaucoma	0	0.0%
Autism	*****	*****
Marfan's Syndrome	0	0.0%
Pheochromocytoma/Paraganglioma	0	0.0%
Any Health Characteristic Above	89	74.2%
None of Health Characteristics Above	31	25.8%
Diabetes	26	21.7%
Insulin	39	32.5%
Chronic Kidney Disease	19	15.8%
Chronic Liver Disease	*****	*****
Hypoglycemia	26	21.7%

Table 1n. Aggregated Characteristics of Members who Use Any Metoprolol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Hypoglycemia Diagnosis by Care Setting⁴		
Ambulatory Visit	93	77.5%
Other Ambulatory Visit ⁶	21	17.5%
Emergency Department	*****	*****
Inpatient Hospital Stay (Primary)	0	0.0%
Inpatient Hospital Stay (Other)	*****	*****
Non-Acute Institutional Stay	0	0.0%

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

⁴An episode may be identified in more than one care setting; summed percentages may not add to 100%.

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Table 1o. Aggregated Characteristics of Members who Use Any Propranolol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics ¹		Number	
Number of Unique patients		745	
Number of Episodes		773	
Demographic Characteristics		Mean	Standard Deviation
Age (years)		7.4	7.2
Age		Number	Percent
0-1 years		360	46.6%
2-5 years		51	6.6%
6-12 years		69	8.9%
13-17 years		293	37.9%
Sex			
Female		436	58.5%
Male		309	41.5%
Race ²			
American Indian or Alaska Native		*****	*****
Asian		*****	*****
Black or African American		67	9.0%
Multi-racial		*****	*****
Native Hawaiian or Other Pacific Islander		*****	*****
Unknown		476	63.9%
White		188	25.2%
Hispanic origin			
Yes		88	11.8%
No		259	34.8%
Unknown		398	53.4%
Year			
2008		14	1.8%
2009		14	1.8%
2010		21	2.7%
2011		14	1.8%
2012		*****	*****
2013		20	2.6%
2014		33	4.3%
2015		68	8.8%
2016		85	11.0%
2017		108	14.0%
2018		115	14.9%
2019		122	15.8%
2020		102	13.2%
2021		29	3.8%
2022		16	2.1%
2023		*****	*****

Table 1o. Aggregated Characteristics of Members who Use Any Propranolol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	1.4	1.6
Hypertension	46	6.0%
Hemangioma	94	12.2%
Heart Failure	40	5.2%
Congenital Heart Disease	254	32.9%
Atrial Fibrillation	*****	*****
Long QT Syndrome	20	2.6%
Other Cardiac Arrhythmia	289	37.4%
Cardiac Arrhythmia (Composite)	294	38.0%
Pulmonary Hypertension	24	3.1%
Cardiomyopathy	44	5.7%
Coronary Artery Disease	*****	*****
Portal Hypertension	*****	*****
Anxiety	139	18.0%
Tremor	18	2.3%
Migraine	126	16.3%
Thyrotoxicosis	20	2.6%
Burns	*****	*****
Glaucoma	*****	*****
Autism	29	3.8%
Marfan's Syndrome	*****	*****
Pheochromocytoma/Paraganglioma	0	0.0%
Any Health Characteristic Above	663	85.8%
None of Health Characteristics Above	110	14.2%
Diabetes	68	8.8%
Insulin	99	12.8%
Chronic Kidney Disease	87	11.3%
Chronic Liver Disease	57	7.4%
Hypoglycemia	277	35.8%

Table 1o. Aggregated Characteristics of Members who Use Any Propranolol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Hypoglycemia Diagnosis by Care Setting⁴		
Ambulatory Visit	401	51.9%
Other Ambulatory Visit ⁶	212	27.4%
Emergency Department	53	6.9%
Inpatient Hospital Stay (Primary)	21	2.7%
Inpatient Hospital Stay (Other)	113	14.6%
Non-Acute Institutional Stay	*****	*****

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

⁴An episode may be identified in more than one care setting; summed percentages may not add to 100%.

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Table 1p. Aggregated Characteristics of Members who Use Metoprolol Extended Release and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics ¹		Number	
Number of Unique patients		61	
Number of Episodes		66	
Demographic Characteristics		Mean	Standard Deviation
Age (years)		15.2	2.8
Age		Number	Percent
0-1 years		*****	*****
2-5 years		0	0.0%
6-12 years		*****	*****
13-17 years		*****	*****
Sex			
Female		39	63.9%
Male		22	36.1%
Race ²			
American Indian or Alaska Native		*****	*****
Asian		0	0.0%
Black or African American		*****	*****
Multi-racial		0	0.0%
Native Hawaiian or Other Pacific Islander		0	0.0%
Unknown		38	62.3%
White		*****	*****
Hispanic origin			
Yes		*****	*****
No		*****	*****
Unknown		34	55.7%
Year			
2008		*****	*****
2009		*****	*****
2010		*****	*****
2011		*****	*****
2012		*****	*****
2013		*****	*****
2014		*****	*****
2015		*****	*****
2016		*****	*****
2017		*****	*****
2018		*****	*****
2019		12	18.2%
2020		*****	*****
2021		0	0.0%
2022		*****	*****
2023		0	0.0%

Table 1p. Aggregated Characteristics of Members who Use Metoprolol Extended Release and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	0.8	1.5
Hypertension	22	33.3%
Hemangioma	0	0.0%
Heart Failure	0	0.0%
Congenital Heart Disease	*****	*****
Atrial Fibrillation	0	0.0%
Long QT Syndrome	0	0.0%
Other Cardiac Arrhythmia	19	28.8%
Cardiac Arrhythmia (Composite)	19	28.8%
Pulmonary Hypertension	*****	*****
Cardiomyopathy	*****	*****
Coronary Artery Disease	0	0.0%
Portal Hypertension	0	0.0%
Anxiety	12	18.2%
Tremor	*****	*****
Migraine	*****	*****
Thyrotoxicosis	0	0.0%
Burns	0	0.0%
Glaucoma	0	0.0%
Autism	*****	*****
Marfan's Syndrome	0	0.0%
Pheochromocytoma/Paraganglioma	0	0.0%
Any Health Characteristic Above	47	71.2%
None of Health Characteristics Above	19	28.8%
Diabetes	12	18.2%
Insulin	22	33.3%
Chronic Kidney Disease	*****	*****
Chronic Liver Disease	*****	*****
Hypoglycemia	13	19.7%

Table 1p. Aggregated Characteristics of Members who Use Metoprolol Extended Release and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Hypoglycemia Diagnosis by Care Setting⁴		
Ambulatory Visit	51	77.3%
Other Ambulatory Visit ⁶	12	18.2%
Emergency Department	*****	*****
Inpatient Hospital Stay (Primary)	0	0.0%
Inpatient Hospital Stay (Other)	*****	*****
Non-Acute Institutional Stay	0	0.0%

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

⁴An episode may be identified in more than one care setting; summed percentages may not add to 100%.

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Table 1r. Aggregated Characteristics of Members who Use Propranolol Extended Release and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics ¹		Number	
Number of Unique patients		41	
Number of Episodes		41	
Demographic Characteristics		Mean	Standard Deviation
Age (years)		15.5	2.0
Age		Number	Percent
0-1 years		0	0.0%
2-5 years		0	0.0%
6-12 years		*****	*****
13-17 years		*****	*****
Sex			
Female		26	63.4%
Male		15	36.6%
Race ²			
American Indian or Alaska Native		0	0.0%
Asian		0	0.0%
Black or African American		*****	*****
Multi-racial		*****	*****
Native Hawaiian or Other Pacific Islander		0	0.0%
Unknown		26	63.4%
White		*****	*****
Hispanic origin			
Yes		*****	*****
No		*****	*****
Unknown		24	58.5%
Year			
2008		*****	*****
2009		0	0.0%
2010		*****	*****
2011		*****	*****
2012		*****	*****
2013		*****	*****
2014		*****	*****
2015		*****	*****
2016		*****	*****
2017		*****	*****
2018		*****	*****
2019		*****	*****
2020		*****	*****
2021		*****	*****
2022		0	0.0%
2023		0	0.0%

Table 1r. Aggregated Characteristics of Members who Use Propranolol Extended Release and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	0.4	0.8
Hypertension	*****	*****
Hemangioma	0	0.0%
Heart Failure	0	0.0%
Congenital Heart Disease	0	0.0%
Atrial Fibrillation	0	0.0%
Long QT Syndrome	0	0.0%
Other Cardiac Arrhythmia	*****	*****
Cardiac Arrhythmia (Composite)	*****	*****
Pulmonary Hypertension	0	0.0%
Cardiomyopathy	*****	*****
Coronary Artery Disease	0	0.0%
Portal Hypertension	0	0.0%
Anxiety	*****	*****
Tremor	0	0.0%
Migraine	24	58.5%
Thyrotoxicosis	0	0.0%
Burns	*****	*****
Glaucoma	0	0.0%
Autism	*****	*****
Marfan's Syndrome	0	0.0%
Pheochromocytoma/Paraganglioma	0	0.0%
Any Health Characteristic Above	32	78.0%
None of Health Characteristics Above	*****	*****
Diabetes	*****	*****
Insulin	*****	*****
Chronic Kidney Disease	*****	*****
Chronic Liver Disease	*****	*****
Hypoglycemia	*****	*****

Table 1r. Aggregated Characteristics of Members who Use Propranolol Extended Release and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Hypoglycemia Diagnosis by Care Setting⁴		
Ambulatory Visit	27	65.9%
Other Ambulatory Visit ⁶	*****	*****
Emergency Department	*****	*****
Inpatient Hospital Stay (Primary)	0	0.0%
Inpatient Hospital Stay (Other)	*****	*****
Non-Acute Institutional Stay	*****	*****

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

⁴An episode may be identified in more than one care setting; summed percentages may not add to 100%.

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Table 1q. Aggregated Characteristics of Members who Use Metoprolol Regular and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics ¹		Number	
Number of Unique patients		46	
Number of Episodes		47	
Demographic Characteristics		Mean	Standard Deviation
Age (years)		14.9	4.0
Age		Number	Percent
0-1 years		*****	*****
2-5 years		*****	*****
6-12 years		*****	*****
13-17 years		*****	*****
Sex			
Female		*****	*****
Male		*****	*****
Race ²			
American Indian or Alaska Native		*****	*****
Asian		0	0.0%
Black or African American		*****	*****
Multi-racial		0	0.0%
Native Hawaiian or Other Pacific Islander		0	0.0%
Unknown		26	56.5%
White		*****	*****
Hispanic origin			
Yes		*****	*****
No		*****	*****
Unknown		23	50.0%
Year			
2008		0	0.0%
2009		*****	*****
2010		0	0.0%
2011		0	0.0%
2012		*****	*****
2013		*****	*****
2014		0	0.0%
2015		*****	*****
2016		*****	*****
2017		14	29.8%
2018		*****	*****
2019		*****	*****
2020		*****	*****
2021		*****	*****
2022		*****	*****
2023		0	0.0%

Table 1q. Aggregated Characteristics of Members who Use Metoprolol Regular and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	1.1	1.3
Hypertension	*****	*****
Hemangioma	0	0.0%
Heart Failure	0	0.0%
Congenital Heart Disease	*****	*****
Atrial Fibrillation	0	0.0%
Long QT Syndrome	0	0.0%
Other Cardiac Arrhythmia	15	31.9%
Cardiac Arrhythmia (Composite)	15	31.9%
Pulmonary Hypertension	0	0.0%
Cardiomyopathy	*****	*****
Coronary Artery Disease	*****	*****
Portal Hypertension	0	0.0%
Anxiety	*****	*****
Tremor	*****	*****
Migraine	*****	*****
Thyrotoxicosis	*****	*****
Burns	0	0.0%
Glaucoma	0	0.0%
Autism	*****	*****
Marfan's Syndrome	0	0.0%
Pheochromocytoma/Paraganglioma	0	0.0%
Any Health Characteristic Above	36	76.6%
None of Health Characteristics Above	11	23.4%
Diabetes	13	27.7%
Insulin	16	34.0%
Chronic Kidney Disease	*****	*****
Chronic Liver Disease	*****	*****
Hypoglycemia	12	25.5%

Table 1q. Aggregated Characteristics of Members who Use Metoprolol Regular and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Hypoglycemia Diagnosis by Care Setting⁴		
Ambulatory Visit	37	78.7%
Other Ambulatory Visit ⁶	*****	*****
Emergency Department	*****	*****
Inpatient Hospital Stay (Primary)	0	0.0%
Inpatient Hospital Stay (Other)	*****	*****
Non-Acute Institutional Stay	0	0.0%

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

⁴An episode may be identified in more than one care setting; summed percentages may not add to 100%.

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Table 1s. Aggregated Characteristics of Members who Use Propranolol Regular and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics ¹		Number	
Number of Unique patients		676	
Number of Episodes		700	
Demographic Characteristics		Mean	Standard Deviation
Age (years)		6.7	7.1
Age		Number	Percent
0-1 years		350	50.0%
2-5 years		50	7.1%
6-12 years		63	9.0%
13-17 years		237	33.9%
Sex			
Female		394	58.3%
Male		282	41.7%
Race ²			
American Indian or Alaska Native		*****	*****
Asian		*****	*****
Black or African American		64	9.5%
Multi-racial		0	0.0%
Native Hawaiian or Other Pacific Islander		*****	*****
Unknown		429	63.5%
White		171	25.3%
Hispanic origin			
Yes		82	12.1%
No		238	35.2%
Unknown		356	52.7%
Year			
2008		11	1.6%
2009		13	1.9%
2010		17	2.4%
2011		11	1.6%
2012		*****	*****
2013		19	2.7%
2014		26	3.7%
2015		63	9.0%
2016		77	11.0%
2017		97	13.9%
2018		107	15.3%
2019		116	16.6%
2020		95	13.6%
2021		25	3.6%
2022		12	1.7%
2023		*****	*****

Table 1s. Aggregated Characteristics of Members who Use Propranolol Regular and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	1.5	1.7
Hypertension	42	6.0%
Hemangioma	86	12.3%
Heart Failure	40	5.7%
Congenital Heart Disease	247	35.3%
Atrial Fibrillation	*****	*****
Long QT Syndrome	20	2.9%
Other Cardiac Arrhythmia	281	40.1%
Cardiac Arrhythmia (Composite)	286	40.9%
Pulmonary Hypertension	24	3.4%
Cardiomyopathy	42	6.0%
Coronary Artery Disease	*****	*****
Portal Hypertension	*****	*****
Anxiety	124	17.7%
Tremor	16	2.3%
Migraine	93	13.3%
Thyrotoxicosis	19	2.7%
Burns	*****	*****
Glaucoma	*****	*****
Autism	27	3.9%
Marfan's Syndrome	0	0.0%
Pheochromocytoma/Paraganglioma	0	0.0%
Any Health Characteristic Above	605	86.4%
None of Health Characteristics Above	95	13.6%
Diabetes	62	8.9%
Insulin	90	12.9%
Chronic Kidney Disease	85	12.1%
Chronic Liver Disease	56	8.0%
Hypoglycemia	266	38.0%

Table 1s. Aggregated Characteristics of Members who Use Propranolol Regular and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Hypoglycemia Diagnosis by Care Setting⁴		
Ambulatory Visit	352	50.3%
Other Ambulatory Visit ⁶	197	28.1%
Emergency Department	51	7.3%
Inpatient Hospital Stay (Primary)	21	3.0%
Inpatient Hospital Stay (Other)	106	15.1%
Non-Acute Institutional Stay	*****	*****

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

⁴An episode may be identified in more than one care setting; summed percentages may not add to 100%.

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Table 1t. Aggregated Characteristics of Members who Use Propranolol Hemangeol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics ¹		Number	
Number of Unique patients		*****	
Number of Episodes		*****	
Demographic Characteristics		Mean	Standard Deviation
Age (years)		0.5	0.4
Age		Number	Percent
0-1 years		*****	*****
2-5 years		0	0.0%
6-12 years		0	0.0%
13-17 years		0	0.0%
Sex			
Female		*****	*****
Male		*****	*****
Race ²			
American Indian or Alaska Native		0	0.0%
Asian		0	0.0%
Black or African American		*****	*****
Multi-racial		0	0.0%
Native Hawaiian or Other Pacific Islander		*****	*****
Unknown		*****	*****
White		*****	*****
Hispanic origin		*****	*****
Yes		*****	*****
No		*****	*****
Unknown		*****	*****
Year			
2008		0	0.0%
2009		0	0.0%
2010		0	0.0%
2011		0	0.0%
2012		0	0.0%
2013		0	0.0%
2014		0	0.0%
2015		*****	*****
2016		*****	*****
2017		0	0.0%
2018		*****	*****
2019		0	0.0%
2020		*****	*****
2021		*****	*****
2022		*****	*****
2023		0	0.0%

Table 1t. Aggregated Characteristics of Members who Use Propranolol Hemangeol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	0.0	NaN
Hypertension	0	0.0%
Hemangioma	*****	*****
Heart Failure	0	0.0%
Congenital Heart Disease	*****	*****
Atrial Fibrillation	0	0.0%
Long QT Syndrome	0	0.0%
Other Cardiac Arrhythmia	0	0.0%
Cardiac Arrhythmia (Composite)	0	0.0%
Pulmonary Hypertension	0	0.0%
Cardiomyopathy	0	0.0%
Coronary Artery Disease	0	0.0%
Portal Hypertension	0	0.0%
Anxiety	0	0.0%
Tremor	0	0.0%
Migraine	0	0.0%
Thyrotoxicosis	0	0.0%
Burns	0	0.0%
Glaucoma	0	0.0%
Autism	0	0.0%
Marfan's Syndrome	0	0.0%
Pheochromocytoma/Paraganglioma	0	0.0%
Any Health Characteristic Above	*****	*****
None of Health Characteristics Above	*****	*****
Diabetes	0	0.0%
Insulin	*****	*****
Chronic Kidney Disease	0	0.0%
Chronic Liver Disease	0	0.0%
Hypoglycemia	*****	*****

Table 1t. Aggregated Characteristics of Members who Use Propranolol Hemangeol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Hypoglycemia Diagnosis by Care Setting⁴		
Ambulatory Visit	*****	*****
Other Ambulatory Visit ⁶	*****	*****
Emergency Department	0	0.0%
Inpatient Hospital Stay (Primary)	0	0.0%
Inpatient Hospital Stay (Other)	*****	*****
Non-Acute Institutional Stay	0	0.0%

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

⁴An episode may be identified in more than one care setting; summed percentages may not add to 100%.

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Table 1u. Aggregated Characteristics of Members who Use Atenolol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics ¹		Number	
Number of Unique patients		113	
Number of Episodes		120	
Demographic Characteristics		Mean	Standard Deviation
Age (years)		11.9	5.4
Age		Number	Percent
0-1 years		*****	*****
2-5 years		*****	*****
6-12 years		30	25.0%
13-17 years		67	55.8%
Sex			
Female		71	62.8%
Male		42	37.2%
Race ²			
American Indian or Alaska Native		*****	*****
Asian		*****	*****
Black or African American		*****	*****
Multi-racial		0	0.0%
Native Hawaiian or Other Pacific Islander		0	0.0%
Unknown		76	67.3%
White		24	21.2%
Hispanic origin			
Yes		21	18.6%
No		37	32.7%
Unknown		55	48.7%
Year			
2008		*****	*****
2009		*****	*****
2010		*****	*****
2011		0	0.0%
2012		*****	*****
2013		*****	*****
2014		*****	*****
2015		15	12.5%
2016		15	12.5%
2017		16	13.3%
2018		11	9.2%
2019		18	15.0%
2020		20	16.7%
2021		*****	*****
2022		*****	*****
2023		0	0.0%

Table 1u. Aggregated Characteristics of Members who Use Atenolol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	1.1	1.7
Hypertension	28	23.3%
Hemangioma	*****	*****
Heart Failure	*****	*****
Congenital Heart Disease	22	18.3%
Atrial Fibrillation	0	0.0%
Long QT Syndrome	*****	*****
Other Cardiac Arrhythmia	45	37.5%
Cardiac Arrhythmia (Composite)	45	37.5%
Pulmonary Hypertension	*****	*****
Cardiomyopathy	*****	*****
Coronary Artery Disease	0	0.0%
Portal Hypertension	0	0.0%
Anxiety	18	15.0%
Tremor	*****	*****
Migraine	*****	*****
Thyrotoxicosis	14	11.7%
Burns	0	0.0%
Glaucoma	*****	*****
Autism	*****	*****
Marfan's Syndrome	0	0.0%
Pheochromocytoma/Paraganglioma	0	0.0%
Any Health Characteristic Above	95	79.2%
None of Health Characteristics Above	25	20.8%
Diabetes	16	13.3%
Insulin	33	27.5%
Chronic Kidney Disease	19	15.8%
Chronic Liver Disease	*****	*****
Hypoglycemia	37	30.8%

Table 1u. Aggregated Characteristics of Members who Use Atenolol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Hypoglycemia Diagnosis by Care Setting⁴		
Ambulatory Visit	72	60.0%
Other Ambulatory Visit ⁶	30	25.0%
Emergency Department	*****	*****
Inpatient Hospital Stay (Primary)	*****	*****
Inpatient Hospital Stay (Other)	15	12.5%
Non-Acute Institutional Stay	0	0.0%

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

⁴An episode may be identified in more than one care setting; summed percentages may not add to 100%.

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Table 1v. Aggregated Characteristics of Members who Use Nadolol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics ¹		Number	
Number of Unique patients		28	
Number of Episodes		29	
Demographic Characteristics		Mean	Standard Deviation
Age (years)		10.6	5.8
Age		Number	Percent
0-1 years		*****	*****
2-5 years		*****	*****
6-12 years		*****	*****
13-17 years		12	41.4%
Sex			
Female		17	60.7%
Male		11	39.3%
Race ²			
American Indian or Alaska Native		0	0.0%
Asian		0	0.0%
Black or African American		*****	*****
Multi-racial		*****	*****
Native Hawaiian or Other Pacific Islander		0	0.0%
Unknown		*****	*****
White		*****	*****
Hispanic origin			
Yes		*****	*****
No		*****	*****
Unknown		17	60.7%
Year			
2008		0	0.0%
2009		*****	*****
2010		*****	*****
2011		0	0.0%
2012		*****	*****
2013		*****	*****
2014		*****	*****
2015		*****	*****
2016		*****	*****
2017		*****	*****
2018		*****	*****
2019		*****	*****
2020		0	0.0%
2021		*****	*****
2022		*****	*****
2023		0	0.0%

Table 1v. Aggregated Characteristics of Members who Use Nadolol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	1.8	2.4
Hypertension	*****	*****
Hemangioma	0	0.0%
Heart Failure	*****	*****
Congenital Heart Disease	*****	*****
Atrial Fibrillation	0	0.0%
Long QT Syndrome	*****	*****
Other Cardiac Arrhythmia	*****	*****
Cardiac Arrhythmia (Composite)	14	48.3%
Pulmonary Hypertension	0	0.0%
Cardiomyopathy	*****	*****
Coronary Artery Disease	*****	*****
Portal Hypertension	0	0.0%
Anxiety	*****	*****
Tremor	0	0.0%
Migraine	*****	*****
Thyrotoxicosis	0	0.0%
Burns	0	0.0%
Glaucoma	0	0.0%
Autism	*****	*****
Marfan's Syndrome	0	0.0%
Pheochromocytoma/Paraganglioma	0	0.0%
Any Health Characteristic Above	21	72.4%
None of Health Characteristics Above	*****	*****
Diabetes	*****	*****
Insulin	*****	*****
Chronic Kidney Disease	*****	*****
Chronic Liver Disease	*****	*****
Hypoglycemia	*****	*****

Table 1v. Aggregated Characteristics of Members who Use Nadolol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Hypoglycemia Diagnosis by Care Setting⁴		
Ambulatory Visit	21	72.4%
Other Ambulatory Visit ⁶	*****	*****
Emergency Department	*****	*****
Inpatient Hospital Stay (Primary)	*****	*****
Inpatient Hospital Stay (Other)	*****	*****
Non-Acute Institutional Stay	0	0.0%

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

⁴An episode may be identified in more than one care setting; summed percentages may not add to 100%.

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.

Table 1w. Aggregated Characteristics of Members who Use Labetalol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics ¹		Number	
Number of Unique patients		52	
Number of Episodes		52	
Demographic Characteristics		Mean	Standard Deviation
Age (years)		12.4	5.6
Age		Number	Percent
0-1 years		*****	*****
2-5 years		*****	*****
6-12 years		*****	*****
13-17 years		31	59.6%
Sex			
Female		36	69.2%
Male		16	30.8%
Race ²			
American Indian or Alaska Native		0	0.0%
Asian		0	0.0%
Black or African American		*****	*****
Multi-racial		0	0.0%
Native Hawaiian or Other Pacific Islander		0	0.0%
Unknown		29	55.8%
White		*****	*****
Hispanic origin			
Yes		*****	*****
No		23	44.2%
Unknown		*****	*****
Year			
2008		*****	*****
2009		*****	*****
2010		*****	*****
2011		*****	*****
2012		*****	*****
2013		0	0.0%
2014		0	0.0%
2015		*****	*****
2016		*****	*****
2017		*****	*****
2018		*****	*****
2019		*****	*****
2020		*****	*****
2021		*****	*****
2022		0	0.0%
2023		0	0.0%

Table 1w. Aggregated Characteristics of Members who Use Labetalol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	2.1	2.9
Hypertension	29	55.8%
Hemangioma	0	0.0%
Heart Failure	*****	*****
Congenital Heart Disease	*****	*****
Atrial Fibrillation	0	0.0%
Long QT Syndrome	*****	*****
Other Cardiac Arrhythmia	*****	*****
Cardiac Arrhythmia (Composite)	*****	*****
Pulmonary Hypertension	0	0.0%
Cardiomyopathy	0	0.0%
Coronary Artery Disease	*****	*****
Portal Hypertension	0	0.0%
Anxiety	*****	*****
Tremor	0	0.0%
Migraine	*****	*****
Thyrotoxicosis	*****	*****
Burns	0	0.0%
Glaucoma	0	0.0%
Autism	0	0.0%
Marfan's Syndrome	0	0.0%
Pheochromocytoma/Paraganglioma	*****	*****
Any Health Characteristic Above	32	61.5%
None of Health Characteristics Above	20	38.5%
Diabetes	11	21.2%
Insulin	14	26.9%
Chronic Kidney Disease	26	50.0%
Chronic Liver Disease	*****	*****
Hypoglycemia	14	26.9%

Table 1w. Aggregated Characteristics of Members who Use Labetalol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Hypoglycemia Diagnosis by Care Setting⁴		
Ambulatory Visit	16	30.8%
Other Ambulatory Visit ⁶	18	34.6%
Emergency Department	*****	*****
Inpatient Hospital Stay (Primary)	*****	*****
Inpatient Hospital Stay (Other)	17	32.7%
Non-Acute Institutional Stay	0	0.0%

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

⁴An episode may be identified in more than one care setting; summed percentages may not add to 100%.

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Table 1x. Aggregated Characteristics of Members who Use Carvedilol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Patient Characteristics ¹		Number	
Number of Unique patients		51	
Number of Episodes		56	
Demographic Characteristics		Mean	Standard Deviation
Age (years)		7.0	7.0
Age		Number	Percent
0-1 years		23	41.1%
2-5 years		*****	*****
6-12 years		*****	*****
13-17 years		20	35.7%
Sex			
Female		20	39.2%
Male		31	60.8%
Race ²			
American Indian or Alaska Native		0	0.0%
Asian		*****	*****
Black or African American		*****	*****
Multi-racial		*****	*****
Native Hawaiian or Other Pacific Islander		0	0.0%
Unknown		28	54.9%
White		*****	*****
Hispanic origin			
Yes		*****	*****
No		23	45.1%
Unknown		*****	*****
Year			
2008		*****	*****
2009		*****	*****
2010		0	0.0%
2011		0	0.0%
2012		0	0.0%
2013		*****	*****
2014		0	0.0%
2015		*****	*****
2016		*****	*****
2017		*****	*****
2018		*****	*****
2019		15	26.8%
2020		*****	*****
2021		*****	*****
2022		*****	*****
2023		0	0.0%

Table 1x. Aggregated Characteristics of Members who Use Carvedilol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Health Characteristics		
Charlson/Elixhauser combined comorbidity score ³	3.6	2.3
Hypertension	*****	*****
Hemangioma	0	0.0%
Heart Failure	31	55.4%
Congenital Heart Disease	28	50.0%
Atrial Fibrillation	0	0.0%
Long QT Syndrome	*****	*****
Other Cardiac Arrhythmia	30	53.6%
Cardiac Arrhythmia (Composite)	30	53.6%
Pulmonary Hypertension	*****	*****
Cardiomyopathy	22	39.3%
Coronary Artery Disease	*****	*****
Portal Hypertension	0	0.0%
Anxiety	*****	*****
Tremor	0	0.0%
Migraine	0	0.0%
Thyrotoxicosis	0	0.0%
Burns	0	0.0%
Glaucoma	0	0.0%
Autism	*****	*****
Marfan's Syndrome	0	0.0%
Pheochromocytoma/Paraganglioma	0	0.0%
Any Health Characteristic Above	47	83.9%
None of Health Characteristics Above	*****	*****
Diabetes	12	21.4%
Insulin	15	26.8%
Chronic Kidney Disease	20	35.7%
Chronic Liver Disease	*****	*****
Hypoglycemia	20	35.7%

Table 1x. Aggregated Characteristics of Members who Use Carvedilol and had a Post-Index Hypoglycemic Event during Exposure in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Hypoglycemia Diagnosis by Care Setting⁴		
Ambulatory Visit	20	35.7%
Other Ambulatory Visit ⁶	16	28.6%
Emergency Department	*****	*****
Inpatient Hospital Stay (Primary)	*****	*****
Inpatient Hospital Stay (Other)	16	28.6%
Non-Acute Institutional Stay	0	0.0%

¹All metrics are based on total number of episodes per group, except for sex, race, and Hispanic origin which are based on total number of unique patients.

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

³The Combined Comorbidity Score is calculated based on comorbidities observed during a requester-defined window around the exposure episode start date. (Gagne JJ, Glynn RJ, Avorn J, Levin R, Schneeweiss S. A Combined Comorbidity Score Predicted Mortality in Elderly Patients Better Than Existing Scores. J Clin Epidemiol. 2011;64(7):749-759; Sun JW, Rogers JR, Her Q, Welch EC, Panozzo CA, Toh S, Gagne JJ. Adaptation and Validation of the Combined Comorbidity Score for ICD-10-CM. Med Care. 2017;55(12):1046-1051)

⁴An episode may be identified in more than one care setting; summed percentages may not add to 100%.

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Table 2. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

	New Users	New Episodes	New Episodes with an Event	Proportion of Episodes with an Event per 10,000 Users (95% Confidence Interval)	Total Years at Risk	Event Rate per 10,000 Patient-Years at Risk (95% Confidence Interval)
<i>Top Beta Blockers</i>	244,266	262,099	1,178	48.23 (45.48, 50.97)	87,476.4	134.66 (127.19, 142.58)
<i>Any Metoprolol</i>	21,144	22,235	120	56.75 (46.63, 66.88)	8,548.2	140.38 (117.38, 167.89)
<i>Any Propranolol</i>	174,771	185,483	773	44.23 (41.12, 47.34)	55,149.3	140.16 (130.62, 150.40)
<i>Metoprolol Extended Release</i>	12,618	13,163	66	52.31 (39.72, 64.89)	5,272.9	125.17 (98.34, 159.32)
<i>Metoprolol Regular</i>	8,656	9,100	47	54.30 (38.82, 69.78)	2,653.9	177.10 (133.06, 235.71)
<i>Propranolol Extended Release</i>	17,731	18,511	41	23.12 (16.05, 30.19)	5,737.9	71.45 (52.61, 97.04)
<i>Propranolol Regular</i>	154,789	163,993	700	45.22 (41.88, 48.57)	45,067.7	155.32 (144.23, 167.27)
<i>Propranolol Hemangeol</i>	3,443	3,489	*****	*****	1,117.5	71.59 (35.80, 143.15)
<i>Atenolol</i>	32,739	35,477	120	36.65 (30.11, 43.20)	13,402.2	89.54 (74.87, 107.08)
<i>Nadolol</i>	6,614	7,266	29	43.85 (27.92, 59.77)	3,606.2	80.42 (55.88, 115.72)
<i>Labetalol</i>	6,374	6,578	52	81.58 (59.50, 103.66)	1,713.6	303.46 (231.24, 398.24)
<i>Carvedilol</i>	4,678	5,164	56	119.71 (88.54, 150.87)	2,914.4	192.15 (147.87, 249.68)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.

Table 3. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023, by Sex

	New Users	New Episodes	New Episodes with an Event	Proportion of Episodes with an Event per 10,000 Users (95% Confidence Interval)	Total Years at Risk	Event Rate per 10,000 Patient- Years at Risk (95% Confidence Interval)
Top Beta Blockers						
Female	148,911	159,689	700	47.01 (43.53, 50.48)	49,455.9	141.54 (131.43, 152.42)
Male	95,355	102,410	478	50.13 (45.65, 54.61)	38,020.5	125.72 (114.94, 137.51)

Table 4. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023, by Age Group

	New Users	New Episodes	New Episodes with an Event	Proportion of Episodes with an Event (95% Confidence Interval)	Total Years at Risk	Event Rate per 10,000 Patient- Years at Risk (95% Confidence Interval)
Top Beta Blockers						
0-1 years	36,162	36,722	407	112.55 (101.68, 123.42)	15,443.1	263.55 (239.15, 290.44)
2-5 years	7,303	7,704	93	127.34 (101.63, 153.06)	3,520.1	264.20 (215.61, 323.74)
6-12 years	46,771	49,858	136	29.08 (24.20, 33.96)	18,784.9	72.40 (61.20, 85.65)
13-17 years	157,425	167,815	542	34.43 (31.54, 37.32)	49,728.2	108.99 (100.19, 118.57)

Table 5. Summary of Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023, by Year

	New Users	New Episodes	New Episodes with an Event	Proportion of Episodes with an Event (95% Confidence Interval)	Total Years at Risk	Event Rate per 10,000 Patient-Years at Risk (95% Confidence Interval)
Top Beta Blockers						
2008	4,586	4,601	22	47.97 (27.97, 67.97)	1,491.9	147.46 (97.09, 223.95)
2009	6,237	6,274	26	41.69 (25.70, 57.68)	1,995.1	130.32 (88.73, 191.40)
2010	6,052	6,084	34	56.18 (37.35, 75.01)	2,008.2	169.31 (120.97, 236.95)
2011	5,871	5,892	*****	*****	2,100.6	85.69 (53.99, 136.01)
2012	5,761	5,800	23	39.92 (23.64, 56.21)	2,019.2	113.91 (75.69, 171.41)
2013	6,365	6,403	37	58.13 (39.45, 76.81)	2,297.2	161.07 (116.70, 222.30)
2014	10,680	10,720	45	42.13 (29.85, 54.42)	3,775.4	119.19 (88.99, 159.64)
2015	18,685	18,762	103	55.12 (44.51, 65.74)	6,343.5	162.37 (133.86, 196.96)
2016	30,539	30,695	136	44.53 (37.07, 52.00)	10,687.6	127.25 (107.56, 150.54)
2017	35,013	35,207	167	47.70 (40.48, 54.91)	13,140.6	127.09 (109.20, 147.90)
2018	36,072	36,273	164	45.46 (38.52, 52.41)	13,223.6	124.02 (106.42, 144.53)
2019	39,508	39,713	188	47.59 (40.80, 54.37)	13,465.4	139.62 (121.02, 161.07)
2020	36,053	36,273	151	41.88 (35.22, 48.55)	9,534.9	158.37 (135.02, 185.75)
2021	9,242	9,291	38	41.12 (28.07, 54.16)	3,128.2	121.47 (88.39, 166.94)
2022	9,123	9,159	25	27.40 (16.68, 38.13)	2,194.6	113.92 (76.97, 168.59)
2023	952	952	*****	*****	70.4	142.14 (20.02, 1,009.10)

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.

Table 6. Summary of Time to End of At-Risk Period for Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Number of Episodes by Episode Length									
		0-90 days		91-180 days		181-270 days		271-364 days	
	Total Number of Episodes	Number of Episodes	Percent of Total Episodes	Number of Episodes	Percent of Total Episodes	Number of Episodes	Percent of Total Episodes	Number of Episodes	Percent of Total Episodes
<i>Top Beta Blockers</i>	262,099	177,984	67.9%	40,860	15.6%	16,526	6.3%	9,681	3.7%
<i>Any Metoprolol</i>	22,235	14,302	64.3%	3,712	16.7%	1,426	6.4%	840	3.8%
<i>Any Propranolol</i>	185,483	130,721	70.5%	27,504	14.8%	11,162	6.0%	6,555	3.5%
<i>Metoprolol Extended Release</i>	13,163	8,160	62.0%	2,328	17.7%	907	6.9%	562	4.3%
<i>Metoprolol Regular</i>	9,100	6,586	72.4%	1,287	14.1%	470	5.2%	235	2.6%
<i>Propranolol Extended Release</i>	18,511	13,018	70.3%	2,787	15.1%	1,087	5.9%	600	3.2%
<i>Propranolol Regular</i>	163,993	118,973	72.5%	23,261	14.2%	9,158	5.6%	5,359	3.3%
<i>Propranolol Hemangeol</i>	3,489	2,037	58.4%	715	20.5%	384	11.0%	213	6.1%
<i>Atenolol</i>	35,477	22,424	63.2%	6,413	18.1%	2,442	6.9%	1,341	3.8%
<i>Nadolol</i>	7,266	4,151	57.1%	1,332	18.3%	554	7.6%	357	4.9%
<i>Labetalol</i>	6,578	5,226	79.4%	666	10.1%	248	3.8%	141	2.1%
<i>Carvedilol</i>	5,164	2,679	51.9%	905	17.5%	486	9.4%	287	5.6%

Table 6 (Continued). Summary of Time to End of At-Risk Period for Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Number of Episodes by Episode Length										
	Total Number of Episodes	365+ days		Distribution of At-Risk Time in Days, by Episode						
		Number of Episodes	Percent of Total Episodes	Minimum	Q1	Median	Q3	Maximum	Mean	Standard Deviation
<i>Top Beta Blockers</i>	262,099	17,048	6.5%	1	45	45	126	4,919	121.9	188.3
<i>Any Metoprolol</i>	22,235	1,955	8.8%	1	45	53	135	4,416	140.4	219.6
<i>Any Propranolol</i>	185,483	9,541	5.1%	1	45	45	111	3,577	108.6	156.8
<i>Metoprolol Extended Release</i>	13,163	1,206	9.2%	1	45	75	144	3,955	146.3	221.0
<i>Metoprolol Regular</i>	9,100	522	5.7%	1	45	45	105	3,235	106.5	166.5
<i>Propranolol Extended Release</i>	18,511	1,019	5.5%	1	45	45	113	3,137	113.2	171.3
<i>Propranolol Regular</i>	163,993	7,242	4.4%	1	45	45	105	3,577	100.4	140.8
<i>Propranolol Hemangeol</i>	3,489	140	4.0%	1	45	75	157	908	117.0	106.9
<i>Atenolol</i>	35,477	2,857	8.1%	1	45	75	135	4,024	138.0	207.9
<i>Nadolol</i>	7,266	872	12.0%	1	45	76	176	4,549	181.3	296.3
<i>Labetalol</i>	6,578	297	4.5%	1	45	45	75	3,266	95.1	167.2
<i>Carvedilol</i>	5,164	807	15.6%	1	45	84	228	3,708	206.1	297.9

Table 7. Summary of Reasons for End of At-Risk Period for Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023¹

Censoring Reason									
		End of Exposure Episode ²		Occurrence of Outcome of Interest ³		Occurrence of User-Defined Censoring Criteria ⁴		Evidence of Death ⁵	
	Total Number of Episodes	Number of Episodes	Percent of Total Episodes	Number of Episodes	Percent of Total Episodes	Number of Episodes	Percent of Total Episodes	Number of Episodes	Percent of Total Episodes
Top Beta Blockers	262,099	225,790	86.1%	1,178	0.4%	0	0.0%	206	0.1%
Any Metoprolol	22,235	18,581	83.6%	120	0.5%	0	0.0%	17	0.1%
Any Propranolol	185,483	162,375	87.5%	773	0.4%	0	0.0%	95	0.1%
Metoprolol Extended Release	13,163	10,146	77.1%	66	0.5%	714	5.4%	*****	*****
Metoprolol Regular	9,100	7,417	81.5%	47	0.5%	594	6.5%	*****	*****
Propranolol Extended Release	18,511	14,959	80.8%	41	0.2%	1,536	8.3%	*****	*****
Propranolol Regular	163,993	139,829	85.3%	700	0.4%	4,907	3.0%	93	0.1%
Propranolol Hemangeol	3,489	2,878	82.5%	*****	*****	85	2.4%	0	0.0%
Atenolol	35,477	29,256	82.5%	120	0.3%	1,017	2.9%	30	0.1%
Nadolol	7,266	5,726	78.8%	29	0.4%	159	2.2%	*****	*****
Labetalol	6,578	5,662	86.1%	52	0.8%	117	1.8%	16	0.2%
Carvedilol	5,164	3,807	73.7%	56	1.1%	125	2.4%	36	0.7%

¹An episode may be censored due to more than one reason if they occur on the same date. Therefore, the sum of the reasons for censoring may be greater than the total number of episodes.

²Represents episodes censored due to end of the exposure episode. In as-treated analyses, exposure episodes are defined using days supplied as recorded in outpatient pharmacy dispensing records, and episodes end after days supplied are exhausted or a pre-determined maximum episode duration is met. In point exposure analyses, exposure episodes end when a pre-determined maximum episode duration is met.

³Represents episodes censored due to occurrence of request-defined event.

⁴Represents episodes censored due to occurrence of additional user-defined criteria using drug, procedure, diagnosis, and/or laboratory codes.

⁵Represents episodes censored due to evidence of death. Death data source and completeness varies by Data Partner.

⁶Represents episodes censored due to disenrollment from health plan. Data Partners often artificially assign a "disenrollment" date equal to data end date for members still enrolled on that date. Therefore, a patient may have dual reasons for censoring as "disenrollment" and "end of data" on the same day - this can be interpreted as right-censoring in most cases.

⁷Represents episodes censored due to Data Partner data end date. This end date represents the last day of the most recent year-month in which all of a Data Partner's data tables in the Sentinel Common Data Model have at least 80% of the record count relative to the prior month.

Table 7 (Continued). Summary of Reasons for End of At-Risk Period for Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023¹

20, 2020

Censoring Reason							
		Disenrollment ⁶		End of Data ⁷		End of Study Period ⁸	
	Total Number of Episodes	Number of Episodes	Percent of Total Episodes	Number of Episodes	Percent of Total Episodes	Number of Episodes	Percent of Total Episodes
Top Beta Blockers	262,099	34,586	13.2%	17,167	6.5%	17,167	6.5%
Any Metoprolol	22,235	3,484	15.7%	1,752	7.9%	1,752	7.9%
Any Propranolol	185,483	22,011	11.9%	11,001	5.9%	11,001	5.9%
Metoprolol Extended Release	13,163	2,199	16.7%	1,120	8.5%	1,120	8.5%
Metoprolol Regular	9,100	1,044	11.5%	501	5.5%	501	5.5%
Propranolol Extended Release	18,511	1,979	10.7%	791	4.3%	791	4.3%
Propranolol Regular	163,993	18,311	11.2%	9,349	5.7%	9,349	5.7%
Propranolol Hemangeol	3,489	498	14.3%	225	6.4%	225	6.4%
Atenolol	35,477	5,018	14.1%	2,326	6.6%	2,326	6.6%
Nadolol	7,266	1,325	18.2%	631	8.7%	631	8.7%
Labetalol	6,578	737	11.2%	391	5.9%	391	5.9%
Carvedilol	5,164	1,138	22.0%	614	11.9%	614	11.9%

¹An episode may be censored due to more than one reason if they occur on the same date. Therefore, the sum of the reasons for censoring may be greater than the total number of episodes.

²Represents episodes censored due to end of the exposure episode. In as-treated analyses, exposure episodes are defined using days supplied as recorded in outpatient pharmacy dispensing records, and episodes end after days supplied are exhausted or a pre-determined maximum episode duration is met. In point exposure analyses, exposure episodes end when a pre-determined maximum episode duration is met.

³Represents episodes censored due to occurrence of request-defined event.

⁴Represents episodes censored due to occurrence of additional user-defined criteria using drug, procedure, diagnosis, and/or laboratory codes.

⁵Represents episodes censored due to evidence of death. Death data source and completeness varies by Data Partner.

⁶Represents episodes censored due to disenrollment from health plan. Data Partners often artificially assign a "disenrollment" date equal to data end date for members still enrolled on that date. Therefore, a patient may have dual reasons for censoring as "disenrollment" and "end of data" on the same day - this can be interpreted as right-censoring in most cases.

⁷Represents episodes censored due to Data Partner data end date. This end date represents the last day of the most recent year-month in which all of a Data Partner's data tables in the Sentinel Common Data Model have at least 80% of the record count relative to the prior month.

Table 8. Summary of Time to End of At-Risk Period due to End of Exposure Episode for Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Number of Episodes Censored due to End of Exposure Episode by Episode Length										
		0-90 days			91-180 days		181-270 days		271-364 days	
	Total Number of Episodes	Total Number of Episodes Censored due to End of Exposure Episode ¹	Number of Episodes	Percent of Total Episodes	Number of Episodes	Percent of Total Episodes	Number of Episodes	Percent of Total Episodes	Number of Episodes	Percent of Total Episodes
<i>Top Beta Blockers</i>	262,099	225,790	160,502	71.1%	34,424	15.2%	13,285	5.9%	7,084	3.1%
<i>Any Metoprolol</i>	22,235	18,581	12,725	68.5%	3,066	16.5%	1,147	6.2%	577	3.1%
<i>Any Propranolol</i>	185,483	162,375	118,602	73.0%	23,355	14.4%	9,051	5.6%	4,962	3.1%
<i>Metoprolol Extended Release</i>	13,163	10,146	6,696	66.0%	1,793	17.7%	688	6.8%	358	3.5%
<i>Metoprolol Regular</i>	9,100	7,417	5,592	75.4%	1,032	13.9%	359	4.8%	156	2.1%
<i>Propranolol Extended Release</i>	18,511	14,959	10,856	72.6%	2,298	15.4%	817	5.5%	405	2.7%
<i>Propranolol Regular</i>	163,993	139,829	104,588	74.8%	19,257	13.8%	7,247	5.2%	3,959	2.8%
<i>Propranolol Hemangeol</i>	3,489	2,878	1,663	57.8%	588	20.4%	325	11.3%	179	6.2%
<i>Atenolol</i>	35,477	29,256	19,448	66.5%	5,287	18.1%	1,931	6.6%	938	3.2%
<i>Nadolol</i>	7,266	5,726	3,575	62.4%	1,061	18.5%	421	7.4%	217	3.8%
<i>Labetalol</i>	6,578	5,662	4,672	82.5%	544	9.6%	190	3.4%	100	1.8%
<i>Carvedilol</i>	5,164	3,807	2,180	57.3%	701	18.4%	343	9.0%	176	4.6%

¹Represents episodes censored due to end of the exposure episode. In as-treated analyses, exposure episodes are defined using days supplied as recorded in outpatient pharmacy dispensing records, and episodes end after days supplied are exhausted or a pre-determined maximum episode duration is met. In point exposure analyses, exposure episodes end when a pre-determined maximum episode duration is met.

Table 8 (Continued). Summary of Time to End of At-Risk Period due to End of Exposure Episode for Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Number of Episodes Censored due to End of Exposure Episode by Episode Length											
		365+ days		Distribution of At-Risk Time in Days, by Episode							
	Total Number of Episodes	Total Number of Episodes Censored due to End of Exposure Episode ¹	Number of Episodes	Percent of Total Episodes							
					Minimum	Q1	Median	Q3	Maximum	Mean	Standard Deviation
<i>Top Beta Blockers</i>	262,099	225,790	10,495	4.6%	2	45	45	109	3,695	105.3	144.7
<i>Any Metoprolol</i>	22,235	18,581	1,066	5.7%	2	45	45	122	3,425	115.2	161.5
<i>Any Propranolol</i>	185,483	162,375	6,405	3.9%	2	45	45	105	3,577	98.0	128.3
<i>Metoprolol Extended Release</i>	13,163	10,146	611	6.0%	2	45	47	135	2,478	121.9	162.7
<i>Metoprolol Regular</i>	9,100	7,417	278	3.7%	2	45	45	90	2,091	91.9	126.8
<i>Propranolol Extended Release</i>	18,511	14,959	583	3.9%	2	45	45	105	2,886	102.1	133.7
<i>Propranolol Regular</i>	163,993	139,829	4,778	3.4%	2	45	45	95	3,577	92.1	116.7
<i>Propranolol Hemangeol</i>	3,489	2,878	123	4.3%	2	45	77	161	908	120.7	107.1
<i>Atenolol</i>	35,477	29,256	1,652	5.6%	2	45	60	135	3,695	118.6	160.6
<i>Nadolol</i>	7,266	5,726	452	7.9%	2	45	75	139	3,507	141.3	216.6
<i>Labetalol</i>	6,578	5,662	156	2.8%	2	45	45	75	2,281	80.0	120.4
<i>Carvedilol</i>	5,164	3,807	407	10.7%	2	45	75	175	2,423	160.4	217.4

¹Represents episodes censored due to end of the exposure episode. In as-treated analyses, exposure episodes are defined using days supplied as recorded in outpatient pharmacy dispensing records, and episodes end after days supplied are exhausted or a pre-determined maximum episode duration is met. In point exposure analyses, exposure episodes end when a pre-determined maximum episode duration is met.

Table 9. Summary of Time to End of At-Risk Period due to Occurrence of Outcome of Interest for Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Number of Episodes Censored due to Occurrence of Outcome of Interest by Episode Length										
		0-90 days		91-180 days		181-270 days		271-364 days		
	Total Number of Episodes	Total Number of Episodes Censored due to Occurrence of Outcome of Interest ¹	Number of Episodes	Percent of Total Episodes	Number of Episodes	Percent of Total Episodes	Number of Episodes	Percent of Total Episodes	Number of Episodes	Percent of Total Episodes
<i>Top Beta Blockers</i>	262,099	1,178	832	70.6%	133	11.3%	79	6.7%	47	4.0%
<i>Any Metoprolol</i>	22,235	120	89	74.2%	12	10.0%	*****	*****	*****	*****
<i>Any Propranolol</i>	185,483	773	559	72.3%	89	11.5%	49	6.3%	28	3.6%
<i>Metoprolol Extended Release</i>	13,163	66	46	69.7%	*****	*****	*****	*****	*****	*****
<i>Metoprolol Regular</i>	9,100	47	*****	*****	*****	*****	*****	*****	*****	*****
<i>Propranolol Extended Release</i>	18,511	41	27	65.9%	*****	*****	*****	*****	0	0.0%
<i>Propranolol Regular</i>	163,993	700	522	74.6%	77	11.0%	41	5.9%	25	3.6%
<i>Propranolol Hemangeol</i>	3,489	*****	*****	*****	*****	*****	*****	*****	0	0.0%
<i>Atenolol</i>	35,477	120	81	67.5%	17	14.2%	*****	*****	*****	*****
<i>Nadolol</i>	7,266	29	*****	*****	*****	*****	*****	*****	*****	*****
<i>Labetalol</i>	6,578	52	*****	*****	*****	*****	*****	*****	0	0.0%
<i>Carvedilol</i>	5,164	56	29	51.8%	*****	*****	*****	*****	*****	*****

¹Represents episodes censored due to occurrence of request-defined event.

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.

Table 9 (Continued). Summary of Time to End of At-Risk Period due to Occurrence of Outcome of Interest for Exposures of Interest in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

Number of Episodes Censored due to Occurrence of Outcome of Interest by Episode Length											
	Total Number of Episodes	Total Number of Episodes Censored due to Occurrence of Outcome of Interest ¹	365+ days		Distribution of At-Risk Time in Days, by Episode						
			Number of Episodes	Percent of Total Episodes	Minimum	Q1	Median	Q3	Maximum	Mean	Standard Deviation
<i>Top Beta Blockers</i>	262,099	1,178	87	7.4%	1	8	34	117	2,988	116.4	243.1
<i>Any Metoprolol</i>	22,235	120	*****	*****	1	15	35	99	1,595	122.3	267.4
<i>Any Propranolol</i>	185,483	773	48	6.2%	1	6	30	105	2,988	104.9	230.4
<i>Metoprolol Extended Release</i>	13,163	66	*****	*****	1	13	39	106	1,573	121.4	243.5
<i>Metoprolol Regular</i>	9,100	47	*****	*****	1	14	29	54	1,595	101.4	270.8
<i>Propranolol Extended Release</i>	18,511	41	*****	*****	1	11	30	163	2,988	214.0	515.6
<i>Propranolol Regular</i>	163,993	700	35	5.0%	1	5	27	93	1,538	88.4	172.4
<i>Propranolol Hemangeol</i>	3,489	*****	0	0.0%	19	27	53	196	266	104.4	99.3
<i>Atenolol</i>	35,477	120	11	9.2%	1	12	47	127	1,738	145.7	294.1
<i>Nadolol</i>	7,266	29	*****	*****	1	10	27	144	1,081	125.9	225.7
<i>Labetalol</i>	6,578	52	*****	*****	1	9	29	66	807	88.0	179.0
<i>Carvedilol</i>	5,164	56	*****	*****	1	12	54	213	741	143.8	176.3

¹Represents episodes censored due to occurrence of request-defined event.

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Table 10. Summary of Episode-Level¹ Cohort Attrition in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

	Top Beta Blockers		Any Metoprolol		Any Propranolol	
	Remaining	Excluded	Remaining	Excluded	Remaining	Excluded
Members meeting enrollment and demographic requirements						
Enrolled at any point during the query period	390,292,397	N/A	390,292,397	N/A	390,292,397	N/A
Had required coverage type (medical and/or drug coverage)	291,747,703	98,544,694	291,747,703	98,544,694	291,747,703	98,544,694
Enrolled during specified age range	129,969,569	161,778,134	129,969,569	161,778,134	129,969,569	161,778,134
Met demographic requirements (sex, race, and Hispanic origin)	129,937,217	32,352	129,937,217	32,352	129,937,217	32,352
Members with a valid index event						
Had any cohort-defining claim during the query period	1,341,332	128,595,885	268,839	129,668,378	770,333	129,166,884
Cohort episodes with a valid index date						
Total number of claims with cohort-identifying codes during the query period	7,077,530	N/A	1,615,493	N/A	3,499,456	N/A
Claim recorded during specified age range	1,945,433	5,132,097	189,191	1,426,302	1,119,143	2,380,313
Episode defining index claim recorded during the query period	359,142	1,586,291	34,521	154,670	243,733	875,410
Cohort episodes with required pre-index history						
Had sufficient pre-index continuous enrollment	262,477	96,665	24,904	9,617	187,293	56,440
Met exclusion criterion of no prior beta blocker use	262,099	378	22,235	2,669	185,483	1,810
Final cohort						
Number of members	244,266	N/A	21,144	N/A	174,771	N/A
Number of episodes	262,099	N/A	22,235	N/A	185,483	N/A

¹Cohorts are formed by first evaluating enrollment and demographic requirements as well as index events among members, then evaluating index dates, pre-index history, and post-index follow-up among episodes. Because of this, the number remaining often increases from the member- to episode-level steps.

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.

Table 10 (Continued). Summary of Episode-Level¹ Cohort Attrition in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

	Metoprolol Extended Release		Metoprolol Regular		Propranolol Extended Release	
	Remaining	Excluded	Remaining	Excluded	Remaining	Excluded
Members meeting enrollment and demographic requirements						
Enrolled at any point during the query period	390,292,397	N/A	390,292,397	N/A	390,292,397	N/A
Had required coverage type (medical and/or drug coverage)	291,747,703	98,544,694	291,747,703	98,544,694	291,747,703	98,544,694
Enrolled during specified age range	129,969,569	161,778,134	129,969,569	161,778,134	129,969,569	161,778,134
Met demographic requirements (sex, race, and Hispanic origin)	129,937,217	32,352	129,937,217	32,352	129,937,217	32,352
Members with a valid index event						
Had any cohort-defining claim during the query period	170,308	129,766,909	119,985	129,817,232	120,645	129,816,572
Cohort episodes with a valid index date						
Total number of claims with cohort-identifying codes during the query period	1,025,868	N/A	594,720	N/A	662,017	N/A
Claim recorded during specified age range	118,798	907,070	70,978	523,742	164,345	497,672
Episode defining index claim recorded during the query period	21,520	97,278	14,935	56,043	33,214	131,131
Cohort episodes with required pre-index history						
Had sufficient pre-index continuous enrollment	15,673	5,847	10,908	4,027	24,164	9,050
Met exclusion criterion of no prior beta blocker use	13,163	2,510	9,100	1,808	18,511	5,653
Final cohort						
Number of members	12,618	N/A	8,656	N/A	17,731	N/A
Number of episodes	13,163	N/A	9,100	N/A	18,511	N/A

¹Cohorts are formed by first evaluating enrollment and demographic requirements as well as index events among members, then evaluating index dates, pre-index history, and post-index follow-up among episodes. Because of this, the number remaining often increases from the member- to episode-level steps.

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.

Table 10 (Continued). Summary of Episode-Level¹ Cohort Attrition in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

	Propranolol Regular		Propranolol Hemangeol		Atenolol	
	Remaining	Excluded	Remaining	Excluded	Remaining	Excluded
Members meeting enrollment and demographic requirements						
Enrolled at any point during the query period	390,292,397	N/A	390,292,397	N/A	390,292,397	N/A
Had required coverage type (medical and/or drug coverage)	291,747,703	98,544,694	291,747,703	98,544,694	291,747,703	98,544,694
Enrolled during specified age range	129,969,569	161,778,134	129,969,569	161,778,134	129,969,569	161,778,134
Met demographic requirements (sex, race, and Hispanic origin)	129,937,217	32,352	129,937,217	32,352	129,937,217	32,352
Members with a valid index event						
Had any cohort-defining claim during the query period	679,339	129,257,878	4,818	129,932,399	124,718	129,812,499
Cohort episodes with a valid index date						
Total number of claims with cohort-identifying codes during the query period	2,823,975	N/A	*****	N/A	859,474	N/A
Claim recorded during specified age range	931,158	1,892,817	*****	*****	377,073	482,401
Episode defining index claim recorded during the query period	216,081	715,077	4,895	23,357	57,979	319,094
Cohort episodes with required pre-index history						
Had sufficient pre-index continuous enrollment	168,002	48,079	4,179	716	38,171	19,808
Met exclusion criterion of no prior beta blocker use	163,993	4,009	3,489	690	35,477	2,694
Final cohort						
Number of members	154,789	N/A	3,443	N/A	32,739	N/A
Number of episodes	163,993	N/A	3,489	N/A	35,477	N/A

¹Cohorts are formed by first evaluating enrollment and demographic requirements as well as index events among members, then evaluating index dates, pre-index history, and post-index follow-up among episodes. Because of this, the number remaining often increases from the member- to episode-level steps.

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.

Table 10 (Continued). Summary of Episode-Level¹ Cohort Attrition in the Sentinel Distributed Database (SDD) from January 1, 2008 to February 28, 2023

	Nadolol		Labetalol		Carvedilol	
	Remaining	Excluded	Remaining	Excluded	Remaining	Excluded
Members meeting enrollment and demographic requirements						
Enrolled at any point during the query period	390,292,397	N/A	390,292,397	N/A	390,292,397	N/A
Had required coverage type (medical and/or drug coverage)	291,747,703	98,544,694	291,747,703	98,544,694	291,747,703	98,544,694
Enrolled during specified age range	129,969,569	161,778,134	129,969,569	161,778,134	129,969,569	161,778,134
Met demographic requirements (sex, race, and Hispanic origin)	129,937,217	32,352	129,937,217	32,352	129,937,217	32,352
Members with a valid index event						
Had any cohort-defining claim during the query period	23,490	129,913,727	192,257	129,744,960	43,247	129,893,970
Cohort episodes with a valid index date						
Total number of claims with cohort-identifying codes during the query period	226,478	N/A	543,914	N/A	351,570	N/A
Claim recorded during specified age range	127,394	99,084	41,980	501,934	94,398	257,172
Episode defining index claim recorded during the query period	14,088	113,306	9,708	32,272	9,211	85,187
Cohort episodes with required pre-index history						
Had sufficient pre-index continuous enrollment	8,648	5,440	6,829	2,879	5,543	3,668
Met exclusion criterion of no prior beta blocker use	7,266	1,382	6,578	251	5,164	379
Final cohort						
Number of members	6,614	N/A	6,374	N/A	4,678	N/A
Number of episodes	7,266	N/A	6,578	N/A	5,164	N/A

¹Cohorts are formed by first evaluating enrollment and demographic requirements as well as index events among members, then evaluating index dates, pre-index history, and post-index follow-up among episodes. Because of this, the number remaining often increases from the member- to episode-level steps.

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.

Appendix A. Dates of Available Data for Each Data Partner (DP) as of Request Distribution Date (August 21, 2023)

Masked DP ID	DP Start Date	DP End Date ¹
DP01	01/01/2007	01/31/2023
DP02	01/01/2008	08/31/2022
DP03	01/01/2014	12/31/2020
DP04	01/01/2008	12/31/2022
DP05	01/01/2006	02/28/2023

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 Generic and Brand Names of Medical Products Used to Define Exposures in this Request

Generic Name	Brand Name
Top Beta Blockers	
top beta blocker	Coreg
top beta blocker	Coreg CR
top beta blocker	Corgard
top beta blocker	Corzide
top beta blocker	Dutoprol
top beta blocker	Hemangeol
top beta blocker	Hypertensolol
top beta blocker	Inderal
top beta blocker	Inderal LA
top beta blocker	Inderal XL
top beta blocker	Inderide
top beta blocker	InnoPran XL
top beta blocker	Kapsargo Sprinkle
top beta blocker	Lopressor
top beta blocker	Lopressor HCT
top beta blocker	Normodyne
top beta blocker	Tenoretic 100
top beta blocker	Tenoretic 50
top beta blocker	Tenormin
top beta blocker	Toprol XL
top beta blocker	Trandate
top beta blocker	atenolol
top beta blocker	atenolol-chlorthalidone
top beta blocker	carvedilol
top beta blocker	carvedilol phosphate
top beta blocker	labetalol
top beta blocker	labetalol in NaCl (iso-osmot)
top beta blocker	labetalol in dextrose 5 %
top beta blocker	labetalol in dextrose,iso-osm
top beta blocker	metoprolol su-hydrochlorothiaz
top beta blocker	metoprolol succinate
top beta blocker	metoprolol ta-hydrochlorothiaz
top beta blocker	metoprolol tartrate
top beta blocker	nadolol
top beta blocker	nadolol-bendroflumethiazide
top beta blocker	propranolol
top beta blocker	propranolol-hydrochlorothiazid

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

Any Metoprolol	
any metoprolol	Dutoprol
any metoprolol	Hypertensolol
any metoprolol	Kaspargo Sprinkle
any metoprolol	Lopressor
any metoprolol	Lopressor HCT
any metoprolol	Toprol XL
any metoprolol	metoprolol su-hydrochlorothiaz
any metoprolol	metoprolol succinate
any metoprolol	metoprolol ta-hydrochlorothiaz
any metoprolol	metoprolol tartrate
Metoprolol (Extended Release)	
metoprolol succinate	Toprol XL
metoprolol succinate	metoprolol succinate
metoprolol succinate/hydrochlorothiazide	Dutoprol
metoprolol succinate/hydrochlorothiazide	metoprolol su-hydrochlorothiaz
Metoprolol (Regular)	
metoprolol succinate	Kaspargo Sprinkle
metoprolol tartrate	Lopressor
metoprolol tartrate	metoprolol tartrate
metoprolol tartrate/dietary supplement,comb.10	Hypertensolol
metoprolol tartrate/hydrochlorothiazide	Lopressor HCT
metoprolol tartrate/hydrochlorothiazide	metoprolol ta-hydrochlorothiaz
Any Propranolol	
any propranolol	Hemangeol
any propranolol	Inderal
any propranolol	Inderal LA
any propranolol	Inderal XL
any propranolol	Inderide
any propranolol	InnoPran XL
any propranolol	propranolol
any propranolol	propranolol-hydrochlorothiazid
Propranolol (Extended Release)	
propranolol HCl	Inderal LA
propranolol HCl	Inderal XL
propranolol HCl	InnoPran XL
propranolol HCl	propranolol

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

Propranolol (Regular)	
propranolol HCl	Inderal
propranolol HCl	propranolol
propranolol HCl/hydrochlorothiazide	Inderide
propranolol HCl/hydrochlorothiazide	propranolol-hydrochlorothiazid
Propranolol (Hemangeol)	
propranolol HCl	Hemangeol
Atenolol	
atenolol	Tenormin
atenolol	atenolol
atenolol/chlorthalidone	Tenoretic 100
atenolol/chlorthalidone	Tenoretic 50
atenolol/chlorthalidone	atenolol-chlorthalidone
Carvedilol	
carvedilol	Coreg
carvedilol	carvedilol
carvedilol phosphate	Coreg CR
carvedilol phosphate	carvedilol phosphate
Labetalol	
labetalol HCl	Normodyne
labetalol HCl	Trandate
labetalol HCl	labetalol
labetalol HCl in dextrose, iso-osmotic	labetalol in dextrose,iso-osm
labetalol HCl in sodium chloride, iso-osmotic	labetalol in NaCl (iso-osmot)
labetalol in dextrose 5 % in water	labetalol in dextrose 5 %
Nadolol	
carvedilol	Coreg
carvedilol	carvedilol
carvedilol phosphate	Coreg CR
carvedilol phosphate	carvedilol phosphate

Appendix C. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Outcomes in this Request

Code	Description	Code Category	Code Type
Hypoglycemia			
251.1	Other specified hypoglycemia	Diagnosis	ICD-9-CM
251.2	Hypoglycemia, unspecified	Diagnosis	ICD-9-CM
775.6	Neonatal hypoglycemia	Diagnosis	ICD-9-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
E08.649	Diabetes mellitus due to underlying condition with hypoglycemia without coma	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
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
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
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
E16.0	Drug-induced hypoglycemia without coma	Diagnosis	ICD-10-CM
E16.1	Other hypoglycemia	Diagnosis	ICD-10-CM
E16.2	Hypoglycemia, unspecified	Diagnosis	ICD-10-CM
P70.3	Iatrogenic neonatal hypoglycemia	Diagnosis	ICD-10-CM
P70.4	Other neonatal hypoglycemia	Diagnosis	ICD-10-CM

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

Generic Name	Brand Name
Metoprolol (Extended Release)	
metoprolol succinate	Toprol XL
metoprolol succinate	metoprolol succinate
metoprolol succinate/hydrochlorothiazide	Dutoprol
metoprolol succinate/hydrochlorothiazide	metoprolol su-hydrochlorothiaz
Metoprolol (Regular)	
metoprolol succinate	Kapsargo Sprinkle
metoprolol tartrate	Lopressor
metoprolol tartrate	metoprolol tartrate
metoprolol tartrate/dietary supplement,comb.10	Hypertensolol
metoprolol tartrate/hydrochlorothiazide	Lopressor HCT
metoprolol tartrate/hydrochlorothiazide	metoprolol ta-hydrochlorothiaz
Any Propranolol	
any propranolol	Hemangeol
any propranolol	Inderal
any propranolol	Inderal LA
any propranolol	Inderal XL
any propranolol	Inderide
any propranolol	InnoPran XL
any propranolol	propranolol
any propranolol	propranolol-hydrochlorothiazid
Propranolol (Extended Release)	
propranolol HCl	Inderal LA
propranolol HCl	Inderal XL
propranolol HCl	InnoPran XL
propranolol HCl	propranolol
Propranolol (Regular)	
propranolol HCl	Inderal
propranolol HCl	propranolol
propranolol HCl/hydrochlorothiazide	Inderide
propranolol HCl/hydrochlorothiazide	propranolol-hydrochlorothiazid
Propranolol (Hemangeol)	
propranolol HCl	Hemangeol
Atenolol	
atenolol	Tenormin
atenolol	atenolol
atenolol/chlorthalidone	Tenoretic 100
atenolol/chlorthalidone	Tenoretic 50
atenolol/chlorthalidone	atenolol-chlorthalidone

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

Generic Name	Brand Name
Carvedilol	
carvedilol	Coreg
carvedilol	carvedilol
carvedilol phosphate	Coreg CR
carvedilol phosphate	carvedilol phosphate
Labetalol	
labetalol HCl	Normodyne
labetalol HCl	Trandate
labetalol HCl	labetalol
labetalol HCl in dextrose, iso-osmotic	labetalol in dextrose,iso-osm
labetalol HCl in sodium chloride, iso-osmotic	labetalol in NaCl (iso-osmot)
labetalol in dextrose 5 % in water	labetalol in dextrose 5 %
Nadolol	
nadolol	Corgard
nadolol	nadolol
nadolol/bendroflumethiazide	Corzide
nadolol/bendroflumethiazide	nadolol-bendroflumethiazide
Acebutolol	
acebutolol HCl	Sectral
acebutolol HCl	acebutolol
Betaxolol	
betaxolol HCl	Kerlone
betaxolol HCl	betaxolol
Nebivolol	
nebivolol HCl	Bystolic
nebivolol HCl	nebivolol
nebivolol HCl/valsartan	Byvalson
Sotalol	
sotalol HCl	Betapace
sotalol HCl	Betapace AF
sotalol HCl	Sorine
sotalol HCl	Sotalol AF
sotalol HCl	Sotylyze
sotalol HCl	sotalol
Timolol	
timolol maleate	timolol maleate

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
Hypertension			
362.11	Hypertensive retinopathy	Diagnosis	ICD-9-CM
401.0	Essential hypertension, malignant	Diagnosis	ICD-9-CM
401.1	Essential hypertension, benign	Diagnosis	ICD-9-CM
401.9	Unspecified essential hypertension	Diagnosis	ICD-9-CM
402.00	Malignant hypertensive heart disease without heart failure	Diagnosis	ICD-9-CM
402.01	Malignant hypertensive heart disease with heart failure	Diagnosis	ICD-9-CM
402.10	Benign hypertensive heart disease without heart failure	Diagnosis	ICD-9-CM
402.11	Benign hypertensive heart disease with heart failure	Diagnosis	ICD-9-CM
402.90	Unspecified hypertensive heart disease without heart failure	Diagnosis	ICD-9-CM
402.91	Hypertensive heart disease, unspecified, with heart failure	Diagnosis	ICD-9-CM
403.00	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage I through stage IV, or unspecified	Diagnosis	ICD-9-CM
403.01	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM
403.10	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage I through stage IV, or unspecified	Diagnosis	ICD-9-CM
403.11	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM
403.90	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage I through stage IV, or unspecified	Diagnosis	ICD-9-CM
403.91	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM
404.00	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	Diagnosis	ICD-9-CM
404.01	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	Diagnosis	ICD-9-CM
404.02	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM
404.03	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM
404.10	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	Diagnosis	ICD-9-CM
404.11	Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	Diagnosis	ICD-9-CM
404.12	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM
404.13	Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM
404.90	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	Diagnosis	ICD-9-CM
404.91	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	Diagnosis	ICD-9-CM
404.92	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
404.93	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM
405.01	Secondary renovascular hypertension, malignant	Diagnosis	ICD-9-CM
405.09	Other secondary hypertension, malignant	Diagnosis	ICD-9-CM
405.11	Secondary renovascular hypertension, benign	Diagnosis	ICD-9-CM
405.19	Other secondary hypertension, benign	Diagnosis	ICD-9-CM
405.91	Secondary renovascular hypertension, unspecified	Diagnosis	ICD-9-CM
405.99	Other secondary hypertension, unspecified	Diagnosis	ICD-9-CM
437.2	Hypertensive encephalopathy	Diagnosis	ICD-9-CM
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
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
I13.10	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
I67.4	Hypertensive encephalopathy	Diagnosis	ICD-10-CM
N26.2	Page kidney	Diagnosis	ICD-10-CM
Hemangioma			
228	Hemangioma and lymphangioma, any site	Diagnosis	ICD-9-CM
228.0	Hemangioma, any site	Diagnosis	ICD-9-CM
228.00	Hemangioma of unspecified site	Diagnosis	ICD-9-CM
228.01	Hemangioma of skin and subcutaneous tissue	Diagnosis	ICD-9-CM
228.02	Hemangioma of intracranial structures	Diagnosis	ICD-9-CM
228.03	Hemangioma of retina	Diagnosis	ICD-9-CM
228.04	Hemangioma of intra-abdominal structures	Diagnosis	ICD-9-CM
228.09	Hemangioma of other sites	Diagnosis	ICD-9-CM
D18	Hemangioma and lymphangioma, any site	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
D18.0	Hemangioma	Diagnosis	ICD-10-CM
D18.00	Hemangioma unspecified site	Diagnosis	ICD-10-CM
D18.01	Hemangioma of skin and subcutaneous tissue	Diagnosis	ICD-10-CM
D18.02	Hemangioma of intracranial structures	Diagnosis	ICD-10-CM
D18.03	Hemangioma of intra-abdominal structures	Diagnosis	ICD-10-CM
D18.09	Hemangioma of other sites	Diagnosis	ICD-10-CM
Heart Failure			
398.91	Rheumatic heart failure (congestive)	Diagnosis	ICD-9-CM
402.01	Malignant hypertensive heart disease with heart failure	Diagnosis	ICD-9-CM
402.11	Benign hypertensive heart disease with heart failure	Diagnosis	ICD-9-CM
402.91	Hypertensive heart disease, unspecified, with heart failure	Diagnosis	ICD-9-CM
404.01	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	Diagnosis	ICD-9-CM
404.03	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM
404.11	Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	Diagnosis	ICD-9-CM
404.13	Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM
404.91	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	Diagnosis	ICD-9-CM
404.93	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM
415.0	Acute cor pulmonale	Diagnosis	ICD-9-CM
428.0	Congestive heart failure, unspecified	Diagnosis	ICD-9-CM
428.20	Unspecified systolic heart failure	Diagnosis	ICD-9-CM
428.21	Acute systolic heart failure	Diagnosis	ICD-9-CM
428.22	Chronic systolic heart failure	Diagnosis	ICD-9-CM
428.23	Acute on chronic systolic heart failure	Diagnosis	ICD-9-CM
428.30	Unspecified diastolic heart failure	Diagnosis	ICD-9-CM
428.31	Acute diastolic heart failure	Diagnosis	ICD-9-CM
428.32	Chronic diastolic heart failure	Diagnosis	ICD-9-CM
428.33	Acute on chronic diastolic heart failure	Diagnosis	ICD-9-CM
428.40	Unspecified combined systolic and diastolic heart failure	Diagnosis	ICD-9-CM
428.41	Acute combined systolic and diastolic heart failure	Diagnosis	ICD-9-CM
428.42	Chronic combined systolic and diastolic heart failure	Diagnosis	ICD-9-CM
428.43	Acute on chronic combined systolic and diastolic heart failure	Diagnosis	ICD-9-CM
428.9	Unspecified heart failure	Diagnosis	ICD-9-CM
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 healthcare system)	Procedure	HCPCS
G8694	Left ventricular ejection fraction (lvef) < 40%	Procedure	HCPCS

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
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
I09.81	Rheumatic heart failure	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
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
I27.81	Cor pulmonale (chronic)	Diagnosis	ICD-10-CM
I27.83	Eisenmenger's syndrome	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
I50.81	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
Congenital Heart Disease			

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
745	Bulbus cordis anomalies and anomalies of cardiac septal closure	Diagnosis	ICD-9-CM
745.0	Bulbus cordis anomalies and anomalies of cardiac septal closure, common truncus	Diagnosis	ICD-9-CM
745.1	Transposition of great vessels	Diagnosis	ICD-9-CM
745.10	Complete transposition of great vessels	Diagnosis	ICD-9-CM
745.11	Transposition of great vessels, double outlet right ventricle	Diagnosis	ICD-9-CM
745.12	Corrected transposition of great vessels	Diagnosis	ICD-9-CM
745.19	Other transposition of great vessels	Diagnosis	ICD-9-CM
745.2	Tetralogy of Fallot	Diagnosis	ICD-9-CM
745.3	Bulbus cordis anomalies and anomalies of cardiac septal closure, common ventricle	Diagnosis	ICD-9-CM
745.4	Ventricular septal defect	Diagnosis	ICD-9-CM
745.5	Ostium secundum type atrial septal defect	Diagnosis	ICD-9-CM
745.6	Endocardial cushion defects	Diagnosis	ICD-9-CM
745.60	Unspecified type congenital endocardial cushion defect	Diagnosis	ICD-9-CM
745.61	Ostium primum defect	Diagnosis	ICD-9-CM
745.69	Other congenital endocardial cushion defect	Diagnosis	ICD-9-CM
745.7	Cor biloculare	Diagnosis	ICD-9-CM
745.8	Other bulbus cordis anomalies and anomalies of cardiac septal closure	Diagnosis	ICD-9-CM
745.9	Unspecified congenital defect of septal closure	Diagnosis	ICD-9-CM
746	Other congenital anomalies of heart	Diagnosis	ICD-9-CM
746.0	Congenital anomalies of pulmonary valve	Diagnosis	ICD-9-CM
746.00	Unspecified congenital pulmonary valve anomaly	Diagnosis	ICD-9-CM
746.01	Congenital atresia of pulmonary valve	Diagnosis	ICD-9-CM
746.02	Congenital stenosis of pulmonary valve	Diagnosis	ICD-9-CM
746.09	Other congenital anomalies of pulmonary valve	Diagnosis	ICD-9-CM
746.1	Congenital tricuspid atresia and stenosis	Diagnosis	ICD-9-CM
746.2	Ebstein's anomaly	Diagnosis	ICD-9-CM
746.3	Congenital stenosis of aortic valve	Diagnosis	ICD-9-CM
746.4	Congenital insufficiency of aortic valve	Diagnosis	ICD-9-CM
746.5	Congenital mitral stenosis	Diagnosis	ICD-9-CM
746.6	Congenital mitral insufficiency	Diagnosis	ICD-9-CM
746.7	Hypoplastic left heart syndrome	Diagnosis	ICD-9-CM
746.8	Other specified congenital anomaly of heart	Diagnosis	ICD-9-CM
746.81	Congenital subaortic stenosis	Diagnosis	ICD-9-CM
746.82	Cor triatriatum	Diagnosis	ICD-9-CM
746.83	Congenital infundibular pulmonic stenosis	Diagnosis	ICD-9-CM
746.84	Congenital obstructive anomalies of heart, not elsewhere classified	Diagnosis	ICD-9-CM
746.85	Congenital coronary artery anomaly	Diagnosis	ICD-9-CM
746.86	Congenital heart block	Diagnosis	ICD-9-CM
746.87	Congenital malposition of heart and cardiac apex	Diagnosis	ICD-9-CM
746.89	Other specified congenital anomaly of heart	Diagnosis	ICD-9-CM
746.9	Unspecified congenital anomaly of heart	Diagnosis	ICD-9-CM
747	Other congenital anomalies of circulatory system	Diagnosis	ICD-9-CM
747.0	Patent ductus arteriosus	Diagnosis	ICD-9-CM
747.1	Coarctation of aorta	Diagnosis	ICD-9-CM
747.10	Coarctation of aorta (preductal) (postductal)	Diagnosis	ICD-9-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
747.11	Congenital interruption of aortic arch	Diagnosis	ICD-9-CM
747.2	Other congenital anomaly of aorta	Diagnosis	ICD-9-CM
747.20	Unspecified congenital anomaly of aorta	Diagnosis	ICD-9-CM
747.21	Congenital anomaly of aortic arch	Diagnosis	ICD-9-CM
747.22	Congenital atresia and stenosis of aorta	Diagnosis	ICD-9-CM
747.29	Other congenital anomaly of aorta	Diagnosis	ICD-9-CM
747.3	Anomalies of pulmonary artery	Diagnosis	ICD-9-CM
747.31	Pulmonary artery coarctation and atresia	Diagnosis	ICD-9-CM
747.32	Pulmonary arteriovenous malformation	Diagnosis	ICD-9-CM
747.39	Other anomalies of pulmonary artery and pulmonary circulation	Diagnosis	ICD-9-CM
747.4	Congenital anomalies of great veins	Diagnosis	ICD-9-CM
747.40	Congenital anomaly of great veins unspecified	Diagnosis	ICD-9-CM
747.41	Total congenital anomalous pulmonary venous connection	Diagnosis	ICD-9-CM
747.42	Partial congenital anomalous pulmonary venous connection	Diagnosis	ICD-9-CM
747.49	Other congenital anomalies of great veins	Diagnosis	ICD-9-CM
747.89	Other specified congenital anomaly of circulatory system	Diagnosis	ICD-9-CM
747.9	Unspecified congenital anomaly of circulatory system	Diagnosis	ICD-9-CM
I27.83	Eisenmenger's syndrome	Diagnosis	ICD-10-CM
P09.5	Abnormal findings on neonatal screening for critical congenital heart disease	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
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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
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	Congenital malformations of great arteries	Diagnosis	ICD-10-CM
Q25.0	Patent ductus arteriosus	Diagnosis	ICD-10-CM
Q25.1	Coarctation of aorta	Diagnosis	ICD-10-CM
Q25.2	Atresia 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
Q25.4	Other congenital malformations of aorta	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
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
Q25.7	Other congenital malformations 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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
Q25.9	Congenital malformation of great arteries, unspecified	Diagnosis	ICD-10-CM
Q26	Congenital malformations of great veins	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
Q26.8	Other congenital malformations of great veins	Diagnosis	ICD-10-CM
Q26.9	Congenital malformation of great vein, unspecified	Diagnosis	ICD-10-CM
Atrial Fibrillation			
427.3	Atrial fibrillation and flutter	Diagnosis	ICD-9-CM
427.31	Atrial fibrillation	Diagnosis	ICD-9-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
I48.91	Unspecified atrial fibrillation	Diagnosis	ICD-10-CM
Long QT Syndrome			
426.82	Long QT syndrome	Diagnosis	ICD-9-CM
I45.81	Long QT syndrome	Diagnosis	ICD-10-CM
Other Cardiac Arrhythmias			
426	Conduction disorders	Diagnosis	ICD-9-CM
426.0	Atrioventricular block, complete	Diagnosis	ICD-9-CM
426.1	Atrioventricular block, other and unspecified	Diagnosis	ICD-9-CM
426.10	Unspecified atrioventricular block	Diagnosis	ICD-9-CM
426.11	First degree atrioventricular block	Diagnosis	ICD-9-CM
426.12	Mobitz (type) II atrioventricular block	Diagnosis	ICD-9-CM
426.13	Other second degree atrioventricular block	Diagnosis	ICD-9-CM
426.2	Left bundle branch hemiblock	Diagnosis	ICD-9-CM
426.3	Other left bundle branch block	Diagnosis	ICD-9-CM
426.4	Right bundle branch block	Diagnosis	ICD-9-CM
426.5	Bundle branch block, other and unspecified	Diagnosis	ICD-9-CM
426.50	Unspecified bundle branch block	Diagnosis	ICD-9-CM
426.51	Right bundle branch block and left posterior fascicular block	Diagnosis	ICD-9-CM
426.52	Right bundle branch block and left anterior fascicular block	Diagnosis	ICD-9-CM
426.53	Other bilateral bundle branch block	Diagnosis	ICD-9-CM
426.54	Trifascicular block	Diagnosis	ICD-9-CM
426.6	Other heart block	Diagnosis	ICD-9-CM
426.7	Anomalous atrioventricular excitation	Diagnosis	ICD-9-CM
426.8	Other specified conduction disorders	Diagnosis	ICD-9-CM
426.81	Lown-Ganong-Levine syndrome	Diagnosis	ICD-9-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
426.82	Long QT syndrome	Diagnosis	ICD-9-CM
426.89	Other specified conduction disorder	Diagnosis	ICD-9-CM
426.9	Unspecified conduction disorder	Diagnosis	ICD-9-CM
427.0	Paroxysmal supraventricular tachycardia	Diagnosis	ICD-9-CM
427.1	Paroxysmal ventricular tachycardia	Diagnosis	ICD-9-CM
427.2	Unspecified paroxysmal tachycardia	Diagnosis	ICD-9-CM
427.3	Atrial fibrillation and flutter	Diagnosis	ICD-9-CM
427.31	Atrial fibrillation	Diagnosis	ICD-9-CM
427.32	Atrial flutter	Diagnosis	ICD-9-CM
427.4	Ventricular fibrillation and flutter	Diagnosis	ICD-9-CM
427.41	Ventricular fibrillation	Diagnosis	ICD-9-CM
427.42	Ventricular flutter	Diagnosis	ICD-9-CM
427.5	Cardiac arrest	Diagnosis	ICD-9-CM
427.6	Premature beats	Diagnosis	ICD-9-CM
427.60	Unspecified premature beats	Diagnosis	ICD-9-CM
427.61	Supraventricular premature beats	Diagnosis	ICD-9-CM
427.69	Other premature beats	Diagnosis	ICD-9-CM
427.8	Other specified cardiac dysrhythmias	Diagnosis	ICD-9-CM
427.81	Sinoatrial node dysfunction	Diagnosis	ICD-9-CM
427.89	Other specified cardiac dysrhythmias	Diagnosis	ICD-9-CM
427.9	Unspecified cardiac dysrhythmia	Diagnosis	ICD-9-CM
I44	Atrioventricular and left bundle-branch block	Diagnosis	ICD-10-CM
I44.0	Atrioventricular block, first degree	Diagnosis	ICD-10-CM
I44.1	Atrioventricular block, second degree	Diagnosis	ICD-10-CM
I44.2	Atrioventricular block, complete	Diagnosis	ICD-10-CM
I44.3	Other and unspecified atrioventricular block	Diagnosis	ICD-10-CM
I44.30	Unspecified atrioventricular block	Diagnosis	ICD-10-CM
I44.39	Other atrioventricular block	Diagnosis	ICD-10-CM
I44.4	Left anterior fascicular block	Diagnosis	ICD-10-CM
I44.5	Left posterior fascicular block	Diagnosis	ICD-10-CM
I44.6	Other and unspecified fascicular block	Diagnosis	ICD-10-CM
I44.60	Unspecified fascicular block	Diagnosis	ICD-10-CM
I44.69	Other fascicular block	Diagnosis	ICD-10-CM
I44.7	Left bundle-branch block, unspecified	Diagnosis	ICD-10-CM
I45	Other conduction disorders	Diagnosis	ICD-10-CM
I45.0	Right fascicular block	Diagnosis	ICD-10-CM
I45.1	Other and unspecified right bundle-branch block	Diagnosis	ICD-10-CM
I45.10	Unspecified right bundle-branch block	Diagnosis	ICD-10-CM
I45.19	Other right bundle-branch block	Diagnosis	ICD-10-CM
I45.2	Bifascicular block	Diagnosis	ICD-10-CM
I45.3	Trifascicular block	Diagnosis	ICD-10-CM
I45.4	Nonspecific intraventricular block	Diagnosis	ICD-10-CM
I45.5	Other specified heart block	Diagnosis	ICD-10-CM
I45.6	Pre-excitation syndrome	Diagnosis	ICD-10-CM
I45.8	Other specified conduction disorders	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
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	Atrial fibrillation and flutter	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
I48.9	Unspecified atrial fibrillation and 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	Other cardiac arrhythmias	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
I49.1	Atrial premature depolarization	Diagnosis	ICD-10-CM
I49.2	Junctional premature depolarization	Diagnosis	ICD-10-CM
I49.3	Ventricular premature depolarization	Diagnosis	ICD-10-CM
I49.4	Other and unspecified premature depolarization	Diagnosis	ICD-10-CM
I49.40	Unspecified premature depolarization	Diagnosis	ICD-10-CM
I49.49	Other premature depolarization	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
R00	Abnormalities of heart beat	Diagnosis	ICD-10-CM
R00.0	Tachycardia, unspecified	Diagnosis	ICD-10-CM
R00.1	Bradycardia, unspecified	Diagnosis	ICD-10-CM
R00.2	Palpitations	Diagnosis	ICD-10-CM
R00.8	Other abnormalities of heart beat	Diagnosis	ICD-10-CM
R00.9	Unspecified abnormalities of heart beat	Diagnosis	ICD-10-CM
Composite Cardiac Arrhythmias			

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
426	Conduction disorders	Diagnosis	ICD-9-CM
426.0	Atrioventricular block, complete	Diagnosis	ICD-9-CM
426.1	Atrioventricular block, other and unspecified	Diagnosis	ICD-9-CM
426.10	Unspecified atrioventricular block	Diagnosis	ICD-9-CM
426.11	First degree atrioventricular block	Diagnosis	ICD-9-CM
426.12	Mobitz (type) II atrioventricular block	Diagnosis	ICD-9-CM
426.13	Other second degree atrioventricular block	Diagnosis	ICD-9-CM
426.2	Left bundle branch hemiblock	Diagnosis	ICD-9-CM
426.3	Other left bundle branch block	Diagnosis	ICD-9-CM
426.4	Right bundle branch block	Diagnosis	ICD-9-CM
426.5	Bundle branch block, other and unspecified	Diagnosis	ICD-9-CM
426.50	Unspecified bundle branch block	Diagnosis	ICD-9-CM
426.51	Right bundle branch block and left posterior fascicular block	Diagnosis	ICD-9-CM
426.52	Right bundle branch block and left anterior fascicular block	Diagnosis	ICD-9-CM
426.53	Other bilateral bundle branch block	Diagnosis	ICD-9-CM
426.54	Trifascicular block	Diagnosis	ICD-9-CM
426.6	Other heart block	Diagnosis	ICD-9-CM
426.7	Anomalous atrioventricular excitation	Diagnosis	ICD-9-CM
426.8	Other specified conduction disorders	Diagnosis	ICD-9-CM
426.81	Lown-Ganong-Levine syndrome	Diagnosis	ICD-9-CM
426.82	Long QT syndrome	Diagnosis	ICD-9-CM
426.89	Other specified conduction disorder	Diagnosis	ICD-9-CM
426.9	Unspecified conduction disorder	Diagnosis	ICD-9-CM
427.0	Paroxysmal supraventricular tachycardia	Diagnosis	ICD-9-CM
427.1	Paroxysmal ventricular tachycardia	Diagnosis	ICD-9-CM
427.2	Unspecified paroxysmal tachycardia	Diagnosis	ICD-9-CM
427.3	Atrial fibrillation and flutter	Diagnosis	ICD-9-CM
427.31	Atrial fibrillation	Diagnosis	ICD-9-CM
427.32	Atrial flutter	Diagnosis	ICD-9-CM
427.4	Ventricular fibrillation and flutter	Diagnosis	ICD-9-CM
427.41	Ventricular fibrillation	Diagnosis	ICD-9-CM
427.42	Ventricular flutter	Diagnosis	ICD-9-CM
427.5	Cardiac arrest	Diagnosis	ICD-9-CM
427.6	Premature beats	Diagnosis	ICD-9-CM
427.60	Unspecified premature beats	Diagnosis	ICD-9-CM
427.61	Supraventricular premature beats	Diagnosis	ICD-9-CM
427.69	Other premature beats	Diagnosis	ICD-9-CM
427.8	Other specified cardiac dysrhythmias	Diagnosis	ICD-9-CM
427.81	Sinoatrial node dysfunction	Diagnosis	ICD-9-CM
427.89	Other specified cardiac dysrhythmias	Diagnosis	ICD-9-CM
427.9	Unspecified cardiac dysrhythmia	Diagnosis	ICD-9-CM
I44	Atrioventricular and left bundle-branch block	Diagnosis	ICD-10-CM
I44.0	Atrioventricular block, first degree	Diagnosis	ICD-10-CM
I44.1	Atrioventricular block, second degree	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
I44.2	Atrioventricular block, complete	Diagnosis	ICD-10-CM
I44.3	Other and unspecified atrioventricular block	Diagnosis	ICD-10-CM
I44.30	Unspecified atrioventricular block	Diagnosis	ICD-10-CM
I44.39	Other atrioventricular block	Diagnosis	ICD-10-CM
I44.4	Left anterior fascicular block	Diagnosis	ICD-10-CM
I44.5	Left posterior fascicular block	Diagnosis	ICD-10-CM
I44.6	Other and unspecified fascicular block	Diagnosis	ICD-10-CM
I44.60	Unspecified fascicular block	Diagnosis	ICD-10-CM
I44.69	Other fascicular block	Diagnosis	ICD-10-CM
I44.7	Left bundle-branch block, unspecified	Diagnosis	ICD-10-CM
I45	Other conduction disorders	Diagnosis	ICD-10-CM
I45.0	Right fascicular block	Diagnosis	ICD-10-CM
I45.1	Other and unspecified right bundle-branch block	Diagnosis	ICD-10-CM
I45.10	Unspecified right bundle-branch block	Diagnosis	ICD-10-CM
I45.19	Other right bundle-branch block	Diagnosis	ICD-10-CM
I45.2	Bifascicular block	Diagnosis	ICD-10-CM
I45.3	Trifascicular block	Diagnosis	ICD-10-CM
I45.4	Nonspecific intraventricular block	Diagnosis	ICD-10-CM
I45.5	Other specified heart block	Diagnosis	ICD-10-CM
I45.6	Pre-excitation syndrome	Diagnosis	ICD-10-CM
I45.8	Other specified conduction disorders	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	Atrial fibrillation and flutter	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
I48.9	Unspecified atrial fibrillation and atrial flutter	Diagnosis	ICD-10-CM
I48.91	Unspecified atrial fibrillation	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
I48.92	Unspecified atrial flutter	Diagnosis	ICD-10-CM
I49	Other cardiac arrhythmias	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
I49.1	Atrial premature depolarization	Diagnosis	ICD-10-CM
I49.2	Junctional premature depolarization	Diagnosis	ICD-10-CM
I49.3	Ventricular premature depolarization	Diagnosis	ICD-10-CM
I49.4	Other and unspecified premature depolarization	Diagnosis	ICD-10-CM
I49.40	Unspecified premature depolarization	Diagnosis	ICD-10-CM
I49.49	Other premature depolarization	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
R00	Abnormalities of heart beat	Diagnosis	ICD-10-CM
R00.0	Tachycardia, unspecified	Diagnosis	ICD-10-CM
R00.1	Bradycardia, unspecified	Diagnosis	ICD-10-CM
R00.2	Palpitations	Diagnosis	ICD-10-CM
R00.8	Other abnormalities of heart beat	Diagnosis	ICD-10-CM
R00.9	Unspecified abnormalities of heart beat	Diagnosis	ICD-10-CM
Pulmonary Hypertension			
416.0	Primary pulmonary hypertension	Diagnosis	ICD-9-CM
416.8	Other chronic pulmonary heart diseases	Diagnosis	ICD-9-CM
416.9	Unspecified chronic pulmonary heart disease	Diagnosis	ICD-9-CM
I27.0	Primary pulmonary hypertension	Diagnosis	ICD-10-CM
I27.2	Other secondary pulmonary hypertension	Diagnosis	ICD-10-CM
I27.20	Pulmonary hypertension, unspecified	Diagnosis	ICD-10-CM
I27.21	Secondary pulmonary arterial hypertension	Diagnosis	ICD-10-CM
I27.22	Pulmonary hypertension due to left heart disease	Diagnosis	ICD-10-CM
I27.23	Pulmonary hypertension due to lung diseases and hypoxia	Diagnosis	ICD-10-CM
I27.24	Chronic thromboembolic pulmonary hypertension	Diagnosis	ICD-10-CM
I27.29	Other secondary pulmonary hypertension	Diagnosis	ICD-10-CM
I27.81	Cor pulmonale (chronic)	Diagnosis	ICD-10-CM
I27.89	Other specified pulmonary heart diseases	Diagnosis	ICD-10-CM
I27.9	Pulmonary heart disease, unspecified	Diagnosis	ICD-10-CM
P29.30	Pulmonary hypertension of newborn	Diagnosis	ICD-10-CM
Cardiomyopathy			
425	Cardiomyopathy	Diagnosis	ICD-9-CM
425.1	Hypertrophic cardiomyopathy	Diagnosis	ICD-9-CM
425.11	Hypertrophic obstructive cardiomyopathy	Diagnosis	ICD-9-CM
425.18	Other hypertrophic cardiomyopathy	Diagnosis	ICD-9-CM
425.2	Obscure cardiomyopathy of Africa	Diagnosis	ICD-9-CM
425.5	Alcoholic cardiomyopathy	Diagnosis	ICD-9-CM
425.7	Nutritional and metabolic cardiomyopathy	Diagnosis	ICD-9-CM
425.8	Cardiomyopathy in other diseases classified elsewhere	Diagnosis	ICD-9-CM

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Code	Description	Code Category	Code Type
425.9	Unspecified secondary cardiomyopathy	Diagnosis	ICD-9-CM
674.5	Peripartum cardiomyopathy	Diagnosis	ICD-9-CM
674.50	Peripartum cardiomyopathy, unspecified as to episode of care or not applicable	Diagnosis	ICD-9-CM
674.51	Peripartum cardiomyopathy, delivered, with or without mention of antepartum condition	Diagnosis	ICD-9-CM
674.52	Peripartum cardiomyopathy, delivered, with mention of postpartum condition	Diagnosis	ICD-9-CM
674.53	Peripartum cardiomyopathy, antepartum condition or complication	Diagnosis	ICD-9-CM
674.54	Peripartum cardiomyopathy, postpartum condition or complication	Diagnosis	ICD-9-CM
A36.81	Diphtheritic cardiomyopathy	Diagnosis	ICD-10-CM
B33.24	Viral cardiomyopathy	Diagnosis	ICD-10-CM
I25.5	Ischemic cardiomyopathy	Diagnosis	ICD-10-CM
I42	Cardiomyopathy	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
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
O90.3	Peripartum cardiomyopathy	Diagnosis	ICD-10-CM
Coronary Artery Disease			
410	Acute myocardial infarction	Diagnosis	ICD-9-CM
410.0	Acute myocardial infarction of anterolateral wall	Diagnosis	ICD-9-CM
410.00	Acute myocardial infarction of anterolateral wall, episode of care unspecified	Diagnosis	ICD-9-CM
410.01	Acute myocardial infarction of anterolateral wall, initial episode of care	Diagnosis	ICD-9-CM
410.02	Acute myocardial infarction of anterolateral wall, subsequent episode of care	Diagnosis	ICD-9-CM
410.1	Acute myocardial infarction of other anterior wall	Diagnosis	ICD-9-CM
410.10	Acute myocardial infarction of other anterior wall, episode of care unspecified	Diagnosis	ICD-9-CM
410.11	Acute myocardial infarction of other anterior wall, initial episode of care	Diagnosis	ICD-9-CM
410.12	Acute myocardial infarction of other anterior wall, subsequent episode of care	Diagnosis	ICD-9-CM
410.2	Acute myocardial infarction of inferolateral wall	Diagnosis	ICD-9-CM
410.20	Acute myocardial infarction of inferolateral wall, episode of care unspecified	Diagnosis	ICD-9-CM
410.21	Acute myocardial infarction of inferolateral wall, initial episode of care	Diagnosis	ICD-9-CM
410.22	Acute myocardial infarction of inferolateral wall, subsequent episode of care	Diagnosis	ICD-9-CM
410.3	Acute myocardial infarction of inferoposterior wall	Diagnosis	ICD-9-CM
410.30	Acute myocardial infarction of inferoposterior wall, episode of care unspecified	Diagnosis	ICD-9-CM
410.31	Acute myocardial infarction of inferoposterior wall, initial episode of care	Diagnosis	ICD-9-CM
410.32	Acute myocardial infarction of inferoposterior wall, subsequent episode of care	Diagnosis	ICD-9-CM
410.4	Acute myocardial infarction of other inferior wall	Diagnosis	ICD-9-CM
410.40	Acute myocardial infarction of other inferior wall, episode of care unspecified	Diagnosis	ICD-9-CM
410.41	Acute myocardial infarction of other inferior wall, initial episode of care	Diagnosis	ICD-9-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
410.42	Acute myocardial infarction of other inferior wall, subsequent episode of care	Diagnosis	ICD-9-CM
410.5	Acute myocardial infarction of other lateral wall	Diagnosis	ICD-9-CM
410.50	Acute myocardial infarction of other lateral wall, episode of care unspecified	Diagnosis	ICD-9-CM
410.51	Acute myocardial infarction of other lateral wall, initial episode of care	Diagnosis	ICD-9-CM
410.52	Acute myocardial infarction of other lateral wall, subsequent episode of care	Diagnosis	ICD-9-CM
410.6	Acute myocardial infarction, true posterior wall infarction	Diagnosis	ICD-9-CM
410.60	Acute myocardial infarction, true posterior wall infarction, episode of care unspecified	Diagnosis	ICD-9-CM
410.61	Acute myocardial infarction, true posterior wall infarction, initial episode of care	Diagnosis	ICD-9-CM
410.62	Acute myocardial infarction, true posterior wall infarction, subsequent episode of care	Diagnosis	ICD-9-CM
410.7	Acute myocardial infarction, subendocardial infarction	Diagnosis	ICD-9-CM
410.70	Acute myocardial infarction, subendocardial infarction, episode of care unspecified	Diagnosis	ICD-9-CM
410.71	Acute myocardial infarction, subendocardial infarction, initial episode of care	Diagnosis	ICD-9-CM
410.72	Acute myocardial infarction, subendocardial infarction, subsequent episode of care	Diagnosis	ICD-9-CM
410.8	Acute myocardial infarction of other specified sites	Diagnosis	ICD-9-CM
410.80	Acute myocardial infarction of other specified sites, episode of care unspecified	Diagnosis	ICD-9-CM
410.81	Acute myocardial infarction of other specified sites, initial episode of care	Diagnosis	ICD-9-CM
410.82	Acute myocardial infarction of other specified sites, subsequent episode of care	Diagnosis	ICD-9-CM
410.9	Acute myocardial infarction, unspecified site	Diagnosis	ICD-9-CM
410.90	Acute myocardial infarction, unspecified site, episode of care unspecified	Diagnosis	ICD-9-CM
410.91	Acute myocardial infarction, unspecified site, initial episode of care	Diagnosis	ICD-9-CM
410.92	Acute myocardial infarction, unspecified site, subsequent episode of care	Diagnosis	ICD-9-CM
411	Other acute and subacute forms of ischemic heart disease	Diagnosis	ICD-9-CM
411.0	Postmyocardial infarction syndrome	Diagnosis	ICD-9-CM
411.1	Intermediate coronary syndrome	Diagnosis	ICD-9-CM
411.8	Other acute and subacute forms of ischemic heart disease	Diagnosis	ICD-9-CM
411.81	Acute coronary occlusion without myocardial infarction	Diagnosis	ICD-9-CM
411.89	Other acute and subacute form of ischemic heart disease	Diagnosis	ICD-9-CM
412	Old myocardial infarction	Diagnosis	ICD-9-CM
413	Angina pectoris	Diagnosis	ICD-9-CM
413.0	Angina decubitus	Diagnosis	ICD-9-CM
413.1	Prinzmetal angina	Diagnosis	ICD-9-CM
413.9	Other and unspecified angina pectoris	Diagnosis	ICD-9-CM
414	Other forms of chronic ischemic heart disease	Diagnosis	ICD-9-CM
414.0	Coronary atherosclerosis	Diagnosis	ICD-9-CM
414.00	Coronary atherosclerosis of unspecified type of vessel, native or graft	Diagnosis	ICD-9-CM
414.01	Coronary atherosclerosis of native coronary artery	Diagnosis	ICD-9-CM
414.02	Coronary atherosclerosis of autologous vein bypass graft	Diagnosis	ICD-9-CM
414.03	Coronary atherosclerosis of nonautologous biological bypass graft	Diagnosis	ICD-9-CM
414.04	Coronary atherosclerosis of artery bypass graft	Diagnosis	ICD-9-CM
414.05	Coronary atherosclerosis of unspecified type of bypass graft	Diagnosis	ICD-9-CM
414.06	Coronary atherosclerosis, of native coronary artery of transplanted heart	Diagnosis	ICD-9-CM
414.07	Coronary atherosclerosis, of bypass graft (artery) (vein) of transplanted heart	Diagnosis	ICD-9-CM
414.1	Aneurysm and dissection of heart	Diagnosis	ICD-9-CM

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Code	Description	Code Category	Code Type
414.10	Aneurysm of heart	Diagnosis	ICD-9-CM
414.11	Aneurysm of coronary vessels	Diagnosis	ICD-9-CM
414.12	Dissection of coronary artery	Diagnosis	ICD-9-CM
414.19	Other aneurysm of heart	Diagnosis	ICD-9-CM
414.2	Chronic total occlusion of coronary artery	Diagnosis	ICD-9-CM
414.3	Coronary atherosclerosis due to lipid rich plaque	Diagnosis	ICD-9-CM
414.4	Coronary atherosclerosis due to calcified coronary lesion	Diagnosis	ICD-9-CM
414.8	Other specified forms of chronic ischemic heart disease	Diagnosis	ICD-9-CM
414.9	Unspecified chronic ischemic heart disease	Diagnosis	ICD-9-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
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

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Code	Description	Code Category	Code Type
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
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 heart with angina pectoris	Diagnosis	ICD-10-CM
I25.70	Atherosclerosis of coronary artery bypass graft(s), unspecified, with angina	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
I25.708	Atherosclerosis of coronary artery bypass graft(s), unspecified, with other forms of angina pectoris	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
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	Diagnosis	ICD-10-CM
I25.750	Atherosclerosis of native coronary artery of transplanted heart with unstable	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
I25.76	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

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Code	Description	Code Category	Code Type
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
Anxiety Disorder			
293.84	Anxiety disorder in conditions classified elsewhere	Diagnosis	ICD-9-CM
300.00	Anxiety state, unspecified	Diagnosis	ICD-9-CM
300.01	Panic disorder without agoraphobia	Diagnosis	ICD-9-CM
300.02	Generalized anxiety disorder	Diagnosis	ICD-9-CM
300.09	Other anxiety states	Diagnosis	ICD-9-CM
300.10	Hysteria, unspecified	Diagnosis	ICD-9-CM
300.20	Phobia, unspecified	Diagnosis	ICD-9-CM
300.21	Agoraphobia with panic disorder	Diagnosis	ICD-9-CM
300.22	Agoraphobia without mention of panic attacks	Diagnosis	ICD-9-CM
300.23	Social phobia	Diagnosis	ICD-9-CM
300.29	Other isolated or specific phobias	Diagnosis	ICD-9-CM
300.3	Obsessive-compulsive disorders	Diagnosis	ICD-9-CM
308.0	Predominant disturbance of emotions	Diagnosis	ICD-9-CM
308.1	Predominant disturbance of consciousness as reaction to stress	Diagnosis	ICD-9-CM
308.2	Predominant psychomotor disturbance as reaction to stress	Diagnosis	ICD-9-CM
308.3	Other acute reactions to stress	Diagnosis	ICD-9-CM
308.4	Mixed disorders as reaction to stress	Diagnosis	ICD-9-CM

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Code	Description	Code Category	Code Type
308.9	Unspecified acute reaction to stress	Diagnosis	ICD-9-CM
309.21	Separation Anxiety Disorder	Diagnosis	ICD-9-CM
309.81	Posttraumatic stress disorder	Diagnosis	ICD-9-CM
313.0	Overanxious disorder specific to childhood and adolescence	Diagnosis	ICD-9-CM
313.21	Shyness disorder of childhood	Diagnosis	ICD-9-CM
313.22	Introverted disorder of childhood	Diagnosis	ICD-9-CM
F06.4	Anxiety disorder due to known physiological condition	Diagnosis	ICD-10-CM
F40.00	Agoraphobia, unspecified	Diagnosis	ICD-10-CM
F40.01	Agoraphobia with panic disorder	Diagnosis	ICD-10-CM
F40.02	Agoraphobia without panic disorder	Diagnosis	ICD-10-CM
F40.10	Social phobia, unspecified	Diagnosis	ICD-10-CM
F40.11	Social phobia, generalized	Diagnosis	ICD-10-CM
F40.210	Arachnophobia	Diagnosis	ICD-10-CM
F40.218	Other animal type phobia	Diagnosis	ICD-10-CM
F40.220	Fear of thunderstorms	Diagnosis	ICD-10-CM
F40.228	Other natural environment type phobia	Diagnosis	ICD-10-CM
F40.230	Fear of blood	Diagnosis	ICD-10-CM
F40.231	Fear of injections and transfusions	Diagnosis	ICD-10-CM
F40.232	Fear of other medical care	Diagnosis	ICD-10-CM
F40.233	Fear of injury	Diagnosis	ICD-10-CM
F40.240	Claustrophobia	Diagnosis	ICD-10-CM
F40.241	Acrophobia	Diagnosis	ICD-10-CM
F40.242	Fear of bridges	Diagnosis	ICD-10-CM
F40.243	Fear of flying	Diagnosis	ICD-10-CM
F40.248	Other situational type phobia	Diagnosis	ICD-10-CM
F40.290	Androphobia	Diagnosis	ICD-10-CM
F40.291	Gynephobia	Diagnosis	ICD-10-CM
F40.298	Other specified phobia	Diagnosis	ICD-10-CM
F40.8	Other phobic anxiety disorders	Diagnosis	ICD-10-CM
F40.9	Phobic anxiety disorder, unspecified	Diagnosis	ICD-10-CM
F41.0	Panic disorder [episodic paroxysmal anxiety]	Diagnosis	ICD-10-CM
F41.1	Generalized anxiety disorder	Diagnosis	ICD-10-CM
F41.3	Other mixed anxiety disorders	Diagnosis	ICD-10-CM
F41.8	Other specified anxiety disorders	Diagnosis	ICD-10-CM
F41.9	Anxiety disorder, unspecified	Diagnosis	ICD-10-CM
F42	Obsessive-compulsive disorder	Diagnosis	ICD-10-CM
F42.2	Mixed obsessional thoughts and acts	Diagnosis	ICD-10-CM
F42.3	Hoarding disorder	Diagnosis	ICD-10-CM
F42.4	Excoriation (skin-picking) disorder	Diagnosis	ICD-10-CM
F42.8	Other obsessive-compulsive disorder	Diagnosis	ICD-10-CM
F42.9	Obsessive-compulsive disorder, unspecified	Diagnosis	ICD-10-CM
F43.0	Acute stress reaction	Diagnosis	ICD-10-CM
F43.10	Post-traumatic stress disorder, unspecified	Diagnosis	ICD-10-CM
F43.11	Post-traumatic stress disorder, acute	Diagnosis	ICD-10-CM
F43.12	Post-traumatic stress disorder, chronic	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
F44.9	Dissociative and conversion disorder, unspecified	Diagnosis	ICD-10-CM
F93.0	Separation anxiety disorder of childhood	Diagnosis	ICD-10-CM
Tremor			
333.1	Essential and other specified forms of tremor	Diagnosis	ICD-9-CM
G25.0	Essential tremor	Diagnosis	ICD-10-CM
G25.1	Drug-induced tremor	Diagnosis	ICD-10-CM
G25.2	Other specified forms of tremor	Diagnosis	ICD-10-CM
R25.1	Tremor, unspecified	Diagnosis	ICD-10-CM
Migraine			
339	Other headache syndromes	Diagnosis	ICD-9-CM
339.0	Cluster headaches and other trigeminal autonomic cephalgias	Diagnosis	ICD-9-CM
339.00	Cluster headache syndrome, unspecified	Diagnosis	ICD-9-CM
339.01	Episodic cluster headache	Diagnosis	ICD-9-CM
339.02	Chronic cluster headache	Diagnosis	ICD-9-CM
339.03	Episodic paroxysmal hemicrania	Diagnosis	ICD-9-CM
339.04	Chronic paroxysmal hemicrania	Diagnosis	ICD-9-CM
339.05	Short lasting unilateral neuralgiform headache with conjunctival injection and tearing	Diagnosis	ICD-9-CM
339.09	Other trigeminal autonomic cephalgias	Diagnosis	ICD-9-CM
339.1	Tension type headache	Diagnosis	ICD-9-CM
339.10	Tension type headache, unspecified	Diagnosis	ICD-9-CM
339.11	Episodic tension type headache	Diagnosis	ICD-9-CM
339.12	Chronic tension type headache	Diagnosis	ICD-9-CM
339.2	Post-traumatic headache	Diagnosis	ICD-9-CM
339.20	Post-traumatic headache, unspecified	Diagnosis	ICD-9-CM
339.21	Acute post-traumatic headache	Diagnosis	ICD-9-CM
339.22	Chronic post-traumatic headache	Diagnosis	ICD-9-CM
339.3	Drug induced headache, not elsewhere classified	Diagnosis	ICD-9-CM
339.4	Complicated headache syndromes	Diagnosis	ICD-9-CM
339.41	Hemicrania continua	Diagnosis	ICD-9-CM
339.42	New daily persistent headache	Diagnosis	ICD-9-CM
339.43	Primary thunderclap headache	Diagnosis	ICD-9-CM
339.44	Other complicated headache syndrome	Diagnosis	ICD-9-CM
339.8	Other specified headache syndromes	Diagnosis	ICD-9-CM
339.81	Hypnic headache	Diagnosis	ICD-9-CM
339.82	Headache associated with sexual activity	Diagnosis	ICD-9-CM
339.83	Primary cough headache	Diagnosis	ICD-9-CM
339.84	Primary exertional headache	Diagnosis	ICD-9-CM
339.85	Primary stabbing headache	Diagnosis	ICD-9-CM
339.89	Other specified headache syndromes	Diagnosis	ICD-9-CM
346	Migraine	Diagnosis	ICD-9-CM
346.0	Migraine with aura	Diagnosis	ICD-9-CM
346.00	Migraine with aura, without mention of intractable migraine without mention of status migrainosus	Diagnosis	ICD-9-CM

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Code	Description	Code Category	Code Type
346.01	Migraine with aura, with intractable migraine, so stated, without mention of status migrainosus	Diagnosis	ICD-9-CM
346.02	Migraine with aura, without mention of intractable migraine with status migrainosus	Diagnosis	ICD-9-CM
346.03	Migraine with aura, with intractable migraine, so stated, with status migrainosus	Diagnosis	ICD-9-CM
346.1	Migraine without aura	Diagnosis	ICD-9-CM
346.10	Migraine without aura, without mention of intractable migraine without mention of status migrainosus	Diagnosis	ICD-9-CM
346.11	Migraine without aura, with intractable migraine, so stated, without mention of status migrainosus	Diagnosis	ICD-9-CM
346.12	Migraine without aura, without mention of intractable migraine with status migrainosus	Diagnosis	ICD-9-CM
346.13	Migraine without aura, with intractable migraine, so stated, with status	Diagnosis	ICD-9-CM
346.2	Variants of migraine, not elsewhere classified	Diagnosis	ICD-9-CM
346.20	Variants of migraine, not elsewhere classified, without mention of intractable migraine without mention of status migrainosus	Diagnosis	ICD-9-CM
346.21	Variants of migraine, not elsewhere classified, with intractable migraine, so stated, without mention of status migrainosus	Diagnosis	ICD-9-CM
346.22	Variants of migraine, not elsewhere classified, without mention of intractable migraine with status migrainosus	Diagnosis	ICD-9-CM
346.23	Variants of migraine, not elsewhere classified, with intractable migraine, so stated, with status migrainosus	Diagnosis	ICD-9-CM
346.3	Hemiplegic migraine	Diagnosis	ICD-9-CM
346.30	Hemiplegic migraine, without mention of intractable migraine without mention of status migrainosus	Diagnosis	ICD-9-CM
346.31	Hemiplegic migraine, with intractable migraine, so stated, without mention of status migrainosus	Diagnosis	ICD-9-CM
346.32	Hemiplegic migraine, without mention of intractable migraine with status migrainosus	Diagnosis	ICD-9-CM
346.33	Hemiplegic migraine, with intractable migraine, so stated, with status migrainosus	Diagnosis	ICD-9-CM
346.4	Menstrual migraine	Diagnosis	ICD-9-CM
346.40	Menstrual migraine, without mention of intractable migraine without mention of status migrainosus	Diagnosis	ICD-9-CM
346.41	Menstrual migraine, with intractable migraine, so stated, without mention of status migrainosus	Diagnosis	ICD-9-CM
346.42	Menstrual migraine, without mention of intractable migraine with status migrainosus	Diagnosis	ICD-9-CM
346.43	Menstrual migraine, with intractable migraine, so stated, with status migrainosus	Diagnosis	ICD-9-CM
346.5	Persistent migraine aura without cerebral infarction	Diagnosis	ICD-9-CM
346.50	Persistent migraine aura without cerebral infarction, without mention of intractable migraine without mention of status migrainosus	Diagnosis	ICD-9-CM
346.51	Persistent migraine aura without cerebral infarction, with intractable migraine, so stated, without mention of status migrainosus	Diagnosis	ICD-9-CM
346.52	Persistent migraine aura without cerebral infarction, without mention of intractable migraine with status migrainosus	Diagnosis	ICD-9-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
346.53	Persistent migraine aura without cerebral infarction, with intractable migraine, so stated, with status migrainosus	Diagnosis	ICD-9-CM
346.6	Persistent migraine aura with cerebral infarction	Diagnosis	ICD-9-CM
346.60	Persistent migraine aura with cerebral infarction, without mention of intractable migraine without mention of status migrainosus	Diagnosis	ICD-9-CM
346.61	Persistent migraine aura with cerebral infarction, with intractable migraine, so stated, without mention of status migrainosus	Diagnosis	ICD-9-CM
346.62	Persistent migraine aura with cerebral infarction, without mention of intractable migraine with status migrainosus	Diagnosis	ICD-9-CM
346.63	Persistent migraine aura with cerebral infarction, with intractable migraine, so stated, with status migrainosus	Diagnosis	ICD-9-CM
346.7	Chronic migraine without aura	Diagnosis	ICD-9-CM
346.70	Chronic migraine without aura, without mention of intractable migraine without mention of status migrainosus	Diagnosis	ICD-9-CM
346.71	Chronic migraine without aura, with intractable migraine, so stated, without mention of status migrainosus	Diagnosis	ICD-9-CM
346.72	Chronic migraine without aura, without mention of intractable migraine with status migrainosus	Diagnosis	ICD-9-CM
346.73	Chronic migraine without aura, with intractable migraine, so stated, with status migrainosus	Diagnosis	ICD-9-CM
346.8	Other forms of migraine	Diagnosis	ICD-9-CM
346.80	Other forms of migraine, without mention of intractable migraine without mention of status migrainosus	Diagnosis	ICD-9-CM
346.81	Other forms of migraine, with intractable migraine, so stated, without mention of status migrainosus	Diagnosis	ICD-9-CM
346.82	Other forms of migraine, without mention of intractable migraine with status migrainosus	Diagnosis	ICD-9-CM
346.83	Other forms of migraine, with intractable migraine, so stated, with status migrainosus	Diagnosis	ICD-9-CM
346.9	Migraine, unspecified	Diagnosis	ICD-9-CM
346.90	Migraine, unspecified without mention of intractable migraine without mention of status migrainosus	Diagnosis	ICD-9-CM
346.91	Migraine, unspecified, with intractable migraine, so stated, without mention of status migrainosus	Diagnosis	ICD-9-CM
346.92	Migraine, unspecified, without mention of intractable migraine with status migrainosus	Diagnosis	ICD-9-CM
346.93	Migraine, unspecified, with intractable migraine, so stated, with status migrainosus	Diagnosis	ICD-9-CM
G43.001	Migraine without aura, not intractable, with status migrainosus	Diagnosis	ICD-10-CM
G43.009	Migraine without aura, not intractable, without status migrainosus	Diagnosis	ICD-10-CM
G43.011	Migraine without aura, intractable, with status migrainosus	Diagnosis	ICD-10-CM
G43.019	Migraine without aura, intractable, without status migrainosus	Diagnosis	ICD-10-CM
G43.101	Migraine with aura, not intractable, with status migrainosus	Diagnosis	ICD-10-CM
G43.109	Migraine with aura, not intractable, without status migrainosus	Diagnosis	ICD-10-CM
G43.111	Migraine with aura, intractable, with status migrainosus	Diagnosis	ICD-10-CM
G43.119	Migraine with aura, intractable, without status migrainosus	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
G43.401	Hemiplegic migraine, not intractable, with status migrainosus	Diagnosis	ICD-10-CM
G43.409	Hemiplegic migraine, not intractable, without status migrainosus	Diagnosis	ICD-10-CM
G43.411	Hemiplegic migraine, intractable, with status migrainosus	Diagnosis	ICD-10-CM
G43.419	Hemiplegic migraine, intractable, without status migrainosus	Diagnosis	ICD-10-CM
G43.501	Persistent migraine aura without cerebral infarction, not intractable, with status migrainosus	Diagnosis	ICD-10-CM
G43.509	Persistent migraine aura without cerebral infarction, not intractable, without status migrainosus	Diagnosis	ICD-10-CM
G43.511	Persistent migraine aura without cerebral infarction, intractable, with status migrainosus	Diagnosis	ICD-10-CM
G43.519	Persistent migraine aura without cerebral infarction, intractable, without status migrainosus	Diagnosis	ICD-10-CM
G43.601	Persistent migraine aura with cerebral infarction, not intractable, with status migrainosus	Diagnosis	ICD-10-CM
G43.609	Persistent migraine aura with cerebral infarction, not intractable, without status migrainosus	Diagnosis	ICD-10-CM
G43.611	Persistent migraine aura with cerebral infarction, intractable, with status migrainosus	Diagnosis	ICD-10-CM
G43.619	Persistent migraine aura with cerebral infarction, intractable, without status migrainosus	Diagnosis	ICD-10-CM
G43.701	Chronic migraine without aura, not intractable, with status migrainosus	Diagnosis	ICD-10-CM
G43.709	Chronic migraine without aura, not intractable, without status migrainosus	Diagnosis	ICD-10-CM
G43.711	Chronic migraine without aura, intractable, with status migrainosus	Diagnosis	ICD-10-CM
G43.719	Chronic migraine without aura, intractable, without status migrainosus	Diagnosis	ICD-10-CM
G43.801	Other migraine, not intractable, with status migrainosus	Diagnosis	ICD-10-CM
G43.809	Other migraine, not intractable, without status migrainosus	Diagnosis	ICD-10-CM
G43.811	Other migraine, intractable, with status migrainosus	Diagnosis	ICD-10-CM
G43.819	Other migraine, intractable, without status migrainosus	Diagnosis	ICD-10-CM
G43.821	Menstrual migraine, not intractable, with status migrainosus	Diagnosis	ICD-10-CM
G43.829	Menstrual migraine, not intractable, without status migrainosus	Diagnosis	ICD-10-CM
G43.831	Menstrual migraine, intractable, with status migrainosus	Diagnosis	ICD-10-CM
G43.839	Menstrual migraine, intractable, without status migrainosus	Diagnosis	ICD-10-CM
G43.901	Migraine, unspecified, not intractable, with status migrainosus	Diagnosis	ICD-10-CM
G43.909	Migraine, unspecified, not intractable, without status migrainosus	Diagnosis	ICD-10-CM
G43.911	Migraine, unspecified, intractable, with status migrainosus	Diagnosis	ICD-10-CM
G43.919	Migraine, unspecified, intractable, without status migrainosus	Diagnosis	ICD-10-CM
G43.A0	Cyclical vomiting, in migraine, not intractable	Diagnosis	ICD-10-CM
G43.A1	Cyclical vomiting, in migraine, intractable	Diagnosis	ICD-10-CM
G43.B0	Ophthalmoplegic migraine, not intractable	Diagnosis	ICD-10-CM
G43.B1	Ophthalmoplegic migraine, intractable	Diagnosis	ICD-10-CM
G43.C0	Periodic headache syndromes in child or adult, not intractable	Diagnosis	ICD-10-CM
G43.C1	Periodic headache syndromes in child or adult, intractable	Diagnosis	ICD-10-CM
G43.D0	Abdominal migraine, not intractable	Diagnosis	ICD-10-CM
G43.D1	Abdominal migraine, intractable	Diagnosis	ICD-10-CM
G44.001	Cluster headache syndrome, unspecified, intractable	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
G44.009	Cluster headache syndrome, unspecified, not intractable	Diagnosis	ICD-10-CM
G44.011	Episodic cluster headache, intractable	Diagnosis	ICD-10-CM
G44.019	Episodic cluster headache, not intractable	Diagnosis	ICD-10-CM
G44.021	Chronic cluster headache, intractable	Diagnosis	ICD-10-CM
G44.029	Chronic cluster headache, not intractable	Diagnosis	ICD-10-CM
G44.031	Episodic paroxysmal hemicrania, intractable	Diagnosis	ICD-10-CM
G44.039	Episodic paroxysmal hemicrania, not intractable	Diagnosis	ICD-10-CM
G44.041	Chronic paroxysmal hemicrania, intractable	Diagnosis	ICD-10-CM
G44.049	Chronic paroxysmal hemicrania, not intractable	Diagnosis	ICD-10-CM
G44.051	Short lasting unilateral neuralgiform headache with conjunctival injection and tearing (SUNCT), intractable	Diagnosis	ICD-10-CM
G44.059	Short lasting unilateral neuralgiform headache with conjunctival injection and tearing (SUNCT), not intractable	Diagnosis	ICD-10-CM
G44.091	Other trigeminal autonomic cephalgias (TAC), intractable	Diagnosis	ICD-10-CM
G44.099	Other trigeminal autonomic cephalgias (TAC), not intractable	Diagnosis	ICD-10-CM
G44.1	Vascular headache, not elsewhere classified	Diagnosis	ICD-10-CM
G44.201	Tension-type headache, unspecified, intractable	Diagnosis	ICD-10-CM
G44.209	Tension-type headache, unspecified, not intractable	Diagnosis	ICD-10-CM
G44.211	Episodic tension-type headache, intractable	Diagnosis	ICD-10-CM
G44.219	Episodic tension-type headache, not intractable	Diagnosis	ICD-10-CM
G44.221	Chronic tension-type headache, intractable	Diagnosis	ICD-10-CM
G44.229	Chronic tension-type headache, not intractable	Diagnosis	ICD-10-CM
G44.301	Post-traumatic headache, unspecified, intractable	Diagnosis	ICD-10-CM
G44.309	Post-traumatic headache, unspecified, not intractable	Diagnosis	ICD-10-CM
G44.311	Acute post-traumatic headache, intractable	Diagnosis	ICD-10-CM
G44.319	Acute post-traumatic headache, not intractable	Diagnosis	ICD-10-CM
G44.321	Chronic post-traumatic headache, intractable	Diagnosis	ICD-10-CM
G44.329	Chronic post-traumatic headache, not intractable	Diagnosis	ICD-10-CM
G44.40	Drug-induced headache, not elsewhere classified, not intractable	Diagnosis	ICD-10-CM
G44.41	Drug-induced headache, not elsewhere classified, intractable	Diagnosis	ICD-10-CM
G44.51	Hemicrania continua	Diagnosis	ICD-10-CM
G44.52	New daily persistent headache (NDPH)	Diagnosis	ICD-10-CM
G44.53	Primary thunderclap headache	Diagnosis	ICD-10-CM
G44.59	Other complicated headache syndrome	Diagnosis	ICD-10-CM
G44.81	Hypnic headache	Diagnosis	ICD-10-CM
G44.82	Headache associated with sexual activity	Diagnosis	ICD-10-CM
G44.83	Primary cough headache	Diagnosis	ICD-10-CM
G44.84	Primary exertional headache	Diagnosis	ICD-10-CM
G44.85	Primary stabbing headache	Diagnosis	ICD-10-CM
G44.89	Other headache syndrome	Diagnosis	ICD-10-CM
Thyrotoxicosis			
242	Thyrotoxicosis with or without goiter	Diagnosis	ICD-9-CM
242.4	Thyrotoxicosis from ectopic thyroid nodule	Diagnosis	ICD-9-CM
242.40	Thyrotoxicosis from ectopic thyroid nodule without mention of thyrotoxic crisis or storm	Diagnosis	ICD-9-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
242.41	Thyrotoxicosis from ectopic thyroid nodule with mention of thyrotoxic crisis or storm	Diagnosis	ICD-9-CM
242.8	Thyrotoxicosis of other specified origin	Diagnosis	ICD-9-CM
242.80	Thyrotoxicosis of other specified origin without mention of thyrotoxic crisis or storm	Diagnosis	ICD-9-CM
242.81	Thyrotoxicosis of other specified origin with mention of thyrotoxic crisis or storm	Diagnosis	ICD-9-CM
242.9	Thyrotoxicosis without mention of goiter or other cause	Diagnosis	ICD-9-CM
242.90	Thyrotoxicosis without mention of goiter or other cause, without mention of thyrotoxic crisis or storm	Diagnosis	ICD-9-CM
242.91	Thyrotoxicosis without mention of goiter or other cause, with mention of thyrotoxic crisis or storm	Diagnosis	ICD-9-CM
775.3	Neonatal thyrotoxicosis	Diagnosis	ICD-9-CM
E05	Thyrotoxicosis [hyperthyroidism]	Diagnosis	ICD-10-CM
E05.0	Thyrotoxicosis with diffuse goiter	Diagnosis	ICD-10-CM
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
E05.1	Thyrotoxicosis with toxic single thyroid nodule	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
E05.2	Thyrotoxicosis with toxic multinodular goiter	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
E05.3	Thyrotoxicosis from ectopic thyroid tissue	Diagnosis	ICD-10-CM
E05.30	Thyrotoxicosis from ectopic thyroid tissue without thyrotoxic crisis or storm	Diagnosis	ICD-10-CM
E05.31	Thyrotoxicosis from ectopic thyroid tissue with thyrotoxic crisis or storm	Diagnosis	ICD-10-CM
E05.4	Thyrotoxicosis factitia	Diagnosis	ICD-10-CM
E05.40	Thyrotoxicosis factitia without thyrotoxic crisis or storm	Diagnosis	ICD-10-CM
E05.41	Thyrotoxicosis factitia with thyrotoxic crisis or storm	Diagnosis	ICD-10-CM
E05.8	Other thyrotoxicosis	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
E05.9	Thyrotoxicosis, unspecified	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
E06.2	Chronic thyroiditis with transient thyrotoxicosis	Diagnosis	ICD-10-CM
P72.1	Transitory neonatal hyperthyroidism	Diagnosis	ICD-10-CM
Burns			
906.5	Late effect of burn of eye, face, head, and neck	Diagnosis	ICD-9-CM
906.6	Late effect of burn of wrist and hand	Diagnosis	ICD-9-CM
906.7	Late effect of burn of other extremities	Diagnosis	ICD-9-CM
906.8	Late effect of burns of other specified sites	Diagnosis	ICD-9-CM
906.9	Late effect of burn of unspecified site	Diagnosis	ICD-9-CM
940	Burn confined to eye and adnexa	Diagnosis	ICD-9-CM
940.1	Other burns of eyelids and periorcular area	Diagnosis	ICD-9-CM
940.4	Other burn of cornea and conjunctival sac	Diagnosis	ICD-9-CM

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Code	Description	Code Category	Code Type
940.5	Burn with resulting rupture and destruction of eyeball	Diagnosis	ICD-9-CM
940.9	Unspecified burn of eye and adnexa	Diagnosis	ICD-9-CM
941	Burn of face, head, and neck	Diagnosis	ICD-9-CM
941.0	Burn of face, head, and neck, unspecified degree	Diagnosis	ICD-9-CM
941.00	Burn of unspecified degree of unspecified site of face and head	Diagnosis	ICD-9-CM
941.01	Burn of unspecified degree of ear (any part)	Diagnosis	ICD-9-CM
941.02	Burn of unspecified degree of eye (with other parts of face, head, and neck)	Diagnosis	ICD-9-CM
941.03	Burn of unspecified degree of lip(s)	Diagnosis	ICD-9-CM
941.04	Burn of unspecified degree of chin	Diagnosis	ICD-9-CM
941.05	Burn of unspecified degree of nose (septum)	Diagnosis	ICD-9-CM
941.06	Burn of unspecified degree of scalp (any part)	Diagnosis	ICD-9-CM
941.07	Burn of unspecified degree of forehead and cheek	Diagnosis	ICD-9-CM
941.08	Burn of unspecified degree of neck	Diagnosis	ICD-9-CM
941.09	Burn of unspecified degree of multiple sites (except with eye) of face, head, and	Diagnosis	ICD-9-CM
941.1	Erythema due to burn (first degree) of face, head, and neck	Diagnosis	ICD-9-CM
941.10	Erythema due to burn (first degree) of unspecified site of face and head	Diagnosis	ICD-9-CM
941.11	Erythema due to burn (first degree) of ear (any part)	Diagnosis	ICD-9-CM
941.12	Erythema due to burn (first degree) of eye (with other parts face, head, and neck)	Diagnosis	ICD-9-CM
941.13	Erythema due to burn (first degree) of lip(s)	Diagnosis	ICD-9-CM
941.14	Erythema due to burn (first degree) of chin	Diagnosis	ICD-9-CM
941.15	Erythema due to burn (first degree) of nose (septum)	Diagnosis	ICD-9-CM
941.16	Erythema due to burn (first degree) of scalp (any part)	Diagnosis	ICD-9-CM
941.17	Erythema due to burn (first degree) of forehead and cheek	Diagnosis	ICD-9-CM
941.18	Erythema due to burn (first degree) of neck	Diagnosis	ICD-9-CM
941.19	Erythema due to burn (first degree) of multiple sites (except with eye) of face, head, and neck	Diagnosis	ICD-9-CM
941.2	Blisters with epidermal loss due to burn (second degree) of face, head, and neck	Diagnosis	ICD-9-CM
941.20	Blisters, with epidermal loss due to burn (second degree) of face and head, unspecified site	Diagnosis	ICD-9-CM
941.21	Blisters, with epidermal loss due to burn (second degree) of ear (any part)	Diagnosis	ICD-9-CM
941.22	Blisters, with epidermal loss due to burn (second degree) of eye (with other parts of face, head, and neck)	Diagnosis	ICD-9-CM
941.23	Blisters, with epidermal loss due to burn (second degree) of lip(s)	Diagnosis	ICD-9-CM
941.24	Blisters, with epidermal loss due to burn (second degree) of chin	Diagnosis	ICD-9-CM
941.25	Blisters, with epidermal loss due to burn (second degree) of nose (septum)	Diagnosis	ICD-9-CM
941.26	Blisters, with epidermal loss due to burn (second degree) of scalp (any part)	Diagnosis	ICD-9-CM
941.27	Blisters, with epidermal loss due to burn (second degree) of forehead and cheek	Diagnosis	ICD-9-CM
941.28	Blisters, with epidermal loss due to burn (second degree) of neck	Diagnosis	ICD-9-CM
941.29	Blisters, with epidermal loss due to burn (second degree) of multiple sites (except with eye) of face, head, and neck	Diagnosis	ICD-9-CM
941.3	Full-thickness skin loss due to burn (third degree NOS) of face, head, and neck	Diagnosis	ICD-9-CM
941.30	Full-thickness skin loss due to burn (third degree NOS) of unspecified site of face and head	Diagnosis	ICD-9-CM
941.31	Full-thickness skin loss due to burn (third degree NOS) of ear (any part)	Diagnosis	ICD-9-CM

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Code	Description	Code Category	Code Type
941.32	Full-thickness skin loss due to burn (third degree NOS) of eye (with other parts of face, head, and neck)	Diagnosis	ICD-9-CM
941.33	Full-thickness skin loss due to burn (third degree NOS) of lip(s)	Diagnosis	ICD-9-CM
941.34	Full-thickness skin loss due to burn (third degree NOS) of chin	Diagnosis	ICD-9-CM
941.35	Full-thickness skin loss due to burn (third degree NOS) of nose (septum)	Diagnosis	ICD-9-CM
941.36	Full-thickness skin loss due to burn (third degree NOS) of scalp (any part)	Diagnosis	ICD-9-CM
941.37	Full-thickness skin loss due to burn (third degree NOS) of forehead and cheek	Diagnosis	ICD-9-CM
941.38	Full-thickness skin loss due to burn (third degree NOS) of neck	Diagnosis	ICD-9-CM
941.39	Full-thickness skin loss due to burn (third degree NOS) of multiple sites (except with eye) of face, head, and neck	Diagnosis	ICD-9-CM
941.4	Deep necrosis of underlying tissues due to burn (deep third degree) of face, head, and neck without mention of loss of a body part	Diagnosis	ICD-9-CM
941.40	Deep necrosis of underlying tissues due to burn (deep third degree) of unspecified site of face and head, without mention of loss of a body part	Diagnosis	ICD-9-CM
941.41	Deep necrosis of underlying tissues due to burn (deep third degree) of ear (any part), without mention of loss of a body part	Diagnosis	ICD-9-CM
941.42	Deep necrosis of underlying tissues due to burn (deep third degree) of eye (with other parts of face, head, and neck), without mention of loss of a body part	Diagnosis	ICD-9-CM
941.43	Deep necrosis of underlying tissues due to burn (deep third degree) of lip(s), without mention of loss of a body part	Diagnosis	ICD-9-CM
941.44	Deep necrosis of underlying tissues due to burn (deep third degree) of chin, without mention of loss of a body part	Diagnosis	ICD-9-CM
941.45	Deep necrosis of underlying tissues due to burn (deep third degree) of nose (septum), without mention of loss of a body part	Diagnosis	ICD-9-CM
941.46	Deep necrosis of underlying tissues due to burn (deep third degree) of scalp (any part), without mention of loss of a body part	Diagnosis	ICD-9-CM
941.47	Deep necrosis of underlying tissues due to burn (deep third degree) of forehead and cheek, without mention of loss of a body part	Diagnosis	ICD-9-CM
941.48	Deep necrosis of underlying tissues due to burn (deep third degree) of neck, without mention of loss of a body part	Diagnosis	ICD-9-CM
941.49	Deep necrosis of underlying tissues due to burn (deep third degree) of multiple sites (except with eye) of face, head, and neck, without mention of loss of a body part	Diagnosis	ICD-9-CM
941.5	Deep necrosis of underlying tissues due to burn (deep third degree) of face, head, and neck with loss of a body part	Diagnosis	ICD-9-CM
941.50	Deep necrosis of underlying tissues due to burn (deep third degree) of face and head, unspecified site, with loss of a body part	Diagnosis	ICD-9-CM
941.51	Deep necrosis of underlying tissues due to burn (deep third degree) of ear (any part), with loss of a body part	Diagnosis	ICD-9-CM
941.52	Deep necrosis of underlying tissues due to burn (deep third degree) of eye (with other parts of face, head, and neck), with loss of a body part	Diagnosis	ICD-9-CM
941.53	Deep necrosis of underlying tissues due to burn (deep third degree) of lip(s), with loss of a body part	Diagnosis	ICD-9-CM
941.54	Deep necrosis of underlying tissues due to burn (deep third degree) of chin, with loss of a body part	Diagnosis	ICD-9-CM

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Code	Description	Code Category	Code Type
941.55	Deep necrosis of underlying tissues due to burn (deep third degree) of nose (septum), with loss of a body part	Diagnosis	ICD-9-CM
941.56	Deep necrosis of underlying tissues due to burn (deep third degree) of scalp (any part), with loss of a body part	Diagnosis	ICD-9-CM
941.57	Deep necrosis of underlying tissues due to burn (deep third degree) of forehead and cheek, with loss of a body part	Diagnosis	ICD-9-CM
941.58	Deep necrosis of underlying tissues due to burn (deep third degree) of neck, with loss of a body part	Diagnosis	ICD-9-CM
941.59	Deep necrosis of underlying tissues due to burn (deep third degree) of multiple sites (except eye) of face, head, and neck, with loss of a body part	Diagnosis	ICD-9-CM
942	Burn of trunk	Diagnosis	ICD-9-CM
942.0	Burn of trunk, unspecified degree	Diagnosis	ICD-9-CM
942.00	Burn of unspecified degree of trunk, unspecified site	Diagnosis	ICD-9-CM
942.01	Burn of trunk, unspecified degree of breast	Diagnosis	ICD-9-CM
942.02	Burn of trunk, unspecified degree of chest wall, excluding breast and nipple	Diagnosis	ICD-9-CM
942.03	Burn of trunk, unspecified degree of abdominal wall	Diagnosis	ICD-9-CM
942.04	Burn of trunk, unspecified degree of back (any part)	Diagnosis	ICD-9-CM
942.05	Burn of trunk, unspecified degree of genitalia	Diagnosis	ICD-9-CM
942.09	Burn of trunk, unspecified degree of other and multiple sites	Diagnosis	ICD-9-CM
942.1	Erythema due to burn (first degree) of trunk	Diagnosis	ICD-9-CM
942.10	Erythema due to burn (first degree) of unspecified site of trunk	Diagnosis	ICD-9-CM
942.11	Erythema due to burn (first degree) of breast	Diagnosis	ICD-9-CM
942.12	Erythema due to burn (first degree) of chest wall, excluding breast and nipple	Diagnosis	ICD-9-CM
942.13	Erythema due to burn (first degree) of abdominal wall	Diagnosis	ICD-9-CM
942.14	Erythema due to burn (first degree) of back (any part)	Diagnosis	ICD-9-CM
942.15	Erythema due to burn (first degree) of genitalia	Diagnosis	ICD-9-CM
942.19	Erythema due to burn (first degree) of other and multiple sites of trunk	Diagnosis	ICD-9-CM
942.2	Blisters with epidermal loss due to burn (second degree) of trunk	Diagnosis	ICD-9-CM
942.20	Blisters with epidermal loss due to burn (second degree) of unspecified site of	Diagnosis	ICD-9-CM
942.21	Blisters with epidermal loss due to burn (second degree) of breast	Diagnosis	ICD-9-CM
942.22	Blisters with epidermal loss due to burn (second degree) of chest wall, excluding breast and nipple	Diagnosis	ICD-9-CM
942.23	Blisters with epidermal loss due to burn (second degree) of abdominal wall	Diagnosis	ICD-9-CM
942.24	Blisters with epidermal loss due to burn (second degree) of back (any part)	Diagnosis	ICD-9-CM
942.25	Blisters with epidermal loss due to burn (second degree) of genitalia	Diagnosis	ICD-9-CM
942.29	Blisters with epidermal loss due to burn (second degree) of other and multiple sites of trunk	Diagnosis	ICD-9-CM
942.3	Full-thickness skin loss due to burn (third degree NOS) of trunk	Diagnosis	ICD-9-CM
942.30	Full-thickness skin loss due to burn (third degree NOS) of unspecified site of trunk	Diagnosis	ICD-9-CM
942.31	Full-thickness skin loss due to burn (third degree NOS) of breast	Diagnosis	ICD-9-CM
942.32	Full-thickness skin loss due to burn (third degree NOS) of chest wall, excluding breast and nipple	Diagnosis	ICD-9-CM
942.33	Full-thickness skin loss due to burn (third degree NOS) of abdominal wall	Diagnosis	ICD-9-CM
942.34	Full-thickness skin loss due to burn (third degree NOS) of back (any part)	Diagnosis	ICD-9-CM
942.35	Full-thickness skin loss due to burn (third degree NOS) of genitalia	Diagnosis	ICD-9-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
942.39	Full-thickness skin loss due to burn (third degree NOS) of other and multiple sites of trunk	Diagnosis	ICD-9-CM
942.4	Deep necrosis of underlying tissues due to burn (deep third degree) of trunk without mention of loss of a body part	Diagnosis	ICD-9-CM
942.40	Deep necrosis of underlying tissues due to burn (deep third degree) of trunk, unspecified site, without mention of loss of a body part	Diagnosis	ICD-9-CM
942.41	Deep necrosis of underlying tissues due to burn (deep third degree) of breast, without mention of loss of a body part	Diagnosis	ICD-9-CM
942.42	Deep necrosis of underlying tissues due to burn (deep third degree) of chest wall, excluding breast and nipple, without mention of loss of a body part	Diagnosis	ICD-9-CM
942.43	Deep necrosis of underlying tissues due to burn (deep third degree) of abdominal wall, without mention of loss of a body part	Diagnosis	ICD-9-CM
942.44	Deep necrosis of underlying tissues due to burn (deep third degree) of back (any part), without mention of loss of a body part	Diagnosis	ICD-9-CM
942.45	Deep necrosis of underlying tissues due to burn (deep third degree) of genitalia, without mention of loss of a body part	Diagnosis	ICD-9-CM
942.49	Deep necrosis of underlying tissues due to burn (deep third degree) of other and multiple sites of trunk, without mention of loss of a body part	Diagnosis	ICD-9-CM
942.5	Deep necrosis of underlying tissues due to burn (deep third degree) of trunk with loss of a body part	Diagnosis	ICD-9-CM
942.50	Deep necrosis of underlying tissues due to burn (deep third degree) of unspecified site of trunk, with loss of a body part	Diagnosis	ICD-9-CM
942.51	Deep necrosis of underlying tissues due to burn (deep third degree) of breast, with loss of a body part	Diagnosis	ICD-9-CM
942.52	Deep necrosis of underlying tissues due to burn (deep third degree) of chest wall, excluding breast and nipple, with loss of a body part	Diagnosis	ICD-9-CM
942.53	Deep necrosis of underlying tissues due to burn (deep third degree) of abdominal wall with loss of a body part	Diagnosis	ICD-9-CM
942.54	Deep necrosis of underlying tissues due to burn (deep third degree) of back (any part), with loss of a body part	Diagnosis	ICD-9-CM
942.55	Deep necrosis of underlying tissues due to burn (deep third degree) of genitalia, with loss of a body part	Diagnosis	ICD-9-CM
942.59	Deep necrosis of underlying tissues due to burn (deep third degree) of other and multiple sites of trunk, with loss of a body part	Diagnosis	ICD-9-CM
943	Burn of upper limb, except wrist and hand	Diagnosis	ICD-9-CM
943.0	Burn of upper limb, except wrist and hand, unspecified degree	Diagnosis	ICD-9-CM
943.00	Burn of unspecified degree of unspecified site of upper limb	Diagnosis	ICD-9-CM
943.01	Burn of unspecified degree of forearm	Diagnosis	ICD-9-CM
943.02	Burn of unspecified degree of elbow	Diagnosis	ICD-9-CM
943.03	Burn of unspecified degree of upper arm	Diagnosis	ICD-9-CM
943.04	Burn of unspecified degree of axilla	Diagnosis	ICD-9-CM
943.05	Burn of unspecified degree of shoulder	Diagnosis	ICD-9-CM
943.06	Burn of unspecified degree of scapular region	Diagnosis	ICD-9-CM
943.09	Burn of unspecified degree multiple sites of upper limb, except wrist and hand	Diagnosis	ICD-9-CM
943.1	Erythema due to burn (first degree) of upper limb, except wrist and hand	Diagnosis	ICD-9-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
943.10	Erythema due to burn (first degree) of unspecified site of upper limb	Diagnosis	ICD-9-CM
943.11	Erythema due to burn (first degree) of forearm	Diagnosis	ICD-9-CM
943.12	Erythema due to burn (first degree) of elbow	Diagnosis	ICD-9-CM
943.13	Erythema due to burn (first degree) of upper arm	Diagnosis	ICD-9-CM
943.14	Erythema due to burn (first degree) of axilla	Diagnosis	ICD-9-CM
943.15	Erythema due to burn (first degree) of shoulder	Diagnosis	ICD-9-CM
943.16	Erythema due to burn (first degree) of scapular region	Diagnosis	ICD-9-CM
943.19	Erythema due to burn (first degree) of multiple sites of upper limb, except wrist and hand	Diagnosis	ICD-9-CM
943.2	Blisters with epidermal loss due to burn (second degree) of upper limb, except wrist and hand	Diagnosis	ICD-9-CM
943.20	Blisters with epidermal loss due to burn (second degree) of unspecified site of upper limb	Diagnosis	ICD-9-CM
943.21	Blisters with epidermal loss due to burn (second degree) of forearm	Diagnosis	ICD-9-CM
943.22	Blisters with epidermal loss due to burn (second degree) of elbow	Diagnosis	ICD-9-CM
943.23	Blisters with epidermal loss due to burn (second degree) of upper arm	Diagnosis	ICD-9-CM
943.24	Blisters with epidermal loss due to burn (second degree) of axilla	Diagnosis	ICD-9-CM
943.25	Blisters with epidermal loss due to burn (second degree) of shoulder	Diagnosis	ICD-9-CM
943.26	Blisters with epidermal loss due to burn (second degree) of scapular region	Diagnosis	ICD-9-CM
943.29	Blisters with epidermal loss due to burn (second degree) of multiple sites of upper limb, except wrist and hand	Diagnosis	ICD-9-CM
943.3	Full-thickness skin loss due to burn (third degree NOS) of upper limb, except wrist and hand	Diagnosis	ICD-9-CM
943.30	Full-thickness skin loss due to burn (third degree NOS) of unspecified site of upper limb	Diagnosis	ICD-9-CM
943.31	Full-thickness skin loss due to burn (third degree NOS) of forearm	Diagnosis	ICD-9-CM
943.32	Full-thickness skin loss due to burn (third degree NOS) of elbow	Diagnosis	ICD-9-CM
943.33	Full-thickness skin loss due to burn (third degree NOS) of upper arm	Diagnosis	ICD-9-CM
943.34	Full-thickness skin loss due to burn (third degree NOS) of axilla	Diagnosis	ICD-9-CM
943.35	Full-thickness skin loss due to burn (third degree NOS) of shoulder	Diagnosis	ICD-9-CM
943.36	Full-thickness skin loss due to burn (third degree NOS) of scapular region	Diagnosis	ICD-9-CM
943.39	Full-thickness skin loss due to burn (third degree NOS) of multiple sites of upper limb, except wrist and hand	Diagnosis	ICD-9-CM
943.4	Deep necrosis of underlying tissues due to burn (deep third degree) of upper limb, except wrist and hand, without mention of loss of a body part	Diagnosis	ICD-9-CM
943.40	Deep necrosis of underlying tissues due to burn (deep third degree) of unspecified site of upper limb, without mention of loss of a body part	Diagnosis	ICD-9-CM
943.41	Deep necrosis of underlying tissues due to burn (deep third degree) of forearm, without mention of loss of a body part	Diagnosis	ICD-9-CM
943.42	Deep necrosis of underlying tissues due to burn (deep third degree) of elbow, without mention of loss of a body part	Diagnosis	ICD-9-CM
943.43	Deep necrosis of underlying tissues due to burn (deep third degree) of upper arm, without mention of loss of a body part	Diagnosis	ICD-9-CM
943.44	Deep necrosis of underlying tissues due to burn (deep third degree) of axilla, without mention of loss of a body part	Diagnosis	ICD-9-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
943.45	Deep necrosis of underlying tissues due to burn (deep third degree) of shoulder, without mention of loss of a body part	Diagnosis	ICD-9-CM
943.46	Deep necrosis of underlying tissues due to burn (deep third degree) of scapular region, without mention of loss of a body part	Diagnosis	ICD-9-CM
943.49	Deep necrosis of underlying tissues due to burn (deep third degree) of multiple sites of upper limb, except wrist and hand, without mention of loss of a body part	Diagnosis	ICD-9-CM
943.5	Deep necrosis of underlying tissues due to burn (deep third degree) of upper limb, except wrist and hand, with loss of a body part	Diagnosis	ICD-9-CM
943.50	Deep necrosis of underlying tissues due to burn (deep third degree) of unspecified site of upper limb, with loss of a body part	Diagnosis	ICD-9-CM
943.51	Deep necrosis of underlying tissues due to burn (deep third degree) of forearm, with loss of a body part	Diagnosis	ICD-9-CM
943.52	Deep necrosis of underlying tissues due to burn (deep third degree) of elbow, with loss of a body part	Diagnosis	ICD-9-CM
943.53	Deep necrosis of underlying tissues due to burn (deep third degree) of upper arm, with loss of upper a body part	Diagnosis	ICD-9-CM
943.54	Deep necrosis of underlying tissues due to burn (deep third degree) of axilla, with loss of a body part	Diagnosis	ICD-9-CM
943.55	Deep necrosis of underlying tissues due to burn (deep third degree) of shoulder, with loss of a body part	Diagnosis	ICD-9-CM
943.56	Deep necrosis of underlying tissues due to burn (deep third degree) of scapular region, with loss of a body part	Diagnosis	ICD-9-CM
943.59	Deep necrosis of underlying tissues due to burn (deep third degree) of multiple sites of upper limb, except wrist and hand, with loss of a body part	Diagnosis	ICD-9-CM
944	Burn of wrist(s) and hand(s)	Diagnosis	ICD-9-CM
944.0	Burn of wrist(s) and hand(s), unspecified degree	Diagnosis	ICD-9-CM
944.00	Burn of unspecified degree of unspecified site of hand	Diagnosis	ICD-9-CM
944.01	Burn of unspecified degree of single digit [finger (nail)] other than thumb	Diagnosis	ICD-9-CM
944.02	Burn of unspecified degree of thumb (nail)	Diagnosis	ICD-9-CM
944.03	Burn of unspecified degree of two or more digits of hand, not including thumb	Diagnosis	ICD-9-CM
944.04	Burn of unspecified degree of two or more digits of hand, including thumb	Diagnosis	ICD-9-CM
944.05	Burn of unspecified degree of palm of hand	Diagnosis	ICD-9-CM
944.06	Burn of unspecified degree of back of hand	Diagnosis	ICD-9-CM
944.07	Burn of unspecified degree of wrist	Diagnosis	ICD-9-CM
944.08	Burn of unspecified degree of multiple sites of wrist(s) and hand(s)	Diagnosis	ICD-9-CM
944.1	Erythema due to burn (first degree) of wrist(s) and hand(s)	Diagnosis	ICD-9-CM
944.10	Erythema due to burn (first degree) of unspecified site of hand	Diagnosis	ICD-9-CM
944.11	Erythema due to burn (first degree) of single digit [finger (nail)] other than thumb	Diagnosis	ICD-9-CM
944.12	Erythema due to burn (first degree) of thumb (nail)	Diagnosis	ICD-9-CM
944.13	Erythema due to burn (first degree) of two or more digits of hand, not including thumb	Diagnosis	ICD-9-CM
944.14	Erythema due to burn (first degree) of two or more digits of hand including thumb	Diagnosis	ICD-9-CM
944.15	Erythema due to burn (first degree) of palm of hand	Diagnosis	ICD-9-CM
944.16	Erythema due to burn (first degree) of back of hand	Diagnosis	ICD-9-CM
944.17	Erythema due to burn (first degree) of wrist	Diagnosis	ICD-9-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
944.18	Erythema due to burn (first degree) of multiple sites of wrist(s) and hand(s)	Diagnosis	ICD-9-CM
944.2	Blisters with epidermal loss due to burn (second degree) of wrist(s) and hand(s)	Diagnosis	ICD-9-CM
944.20	Blisters with epidermal loss due to burn (second degree) of unspecified site of	Diagnosis	ICD-9-CM
944.21	Blisters with epidermal loss due to burn (second degree) of single digit [finger (nail)] other than thumb	Diagnosis	ICD-9-CM
944.22	Blisters with epidermal loss due to burn of (second degree) of thumb (nail)	Diagnosis	ICD-9-CM
944.23	Blisters with epidermal loss due to burn (second degree) of two or more digits of hand, not including thumb	Diagnosis	ICD-9-CM
944.24	Blisters with epidermal loss due to burn (second degree) of two or more digits of hand including thumb	Diagnosis	ICD-9-CM
944.25	Blisters with epidermal loss due to burn (second degree) of palm of hand	Diagnosis	ICD-9-CM
944.26	Blisters with epidermal loss due to burn (second degree) of back of hand	Diagnosis	ICD-9-CM
944.27	Blisters with epidermal loss due to burn (second degree) of wrist	Diagnosis	ICD-9-CM
944.28	Blisters with epidermal loss due to burn (second degree) of multiple sites of wrist(s) and hand(s)	Diagnosis	ICD-9-CM
944.3	Full-thickness skin loss due to burn (third degree NOS) of wrist(s) and hand(s)	Diagnosis	ICD-9-CM
944.30	Full-thickness skin loss due to burn (third degree NOS) of unspecified site of hand	Diagnosis	ICD-9-CM
944.31	Full-thickness skin loss due to burn (third degree NOS) of single digit [finger (nail)] other than thumb	Diagnosis	ICD-9-CM
944.32	Full-thickness skin loss due to burn (third degree NOS) of thumb (nail)	Diagnosis	ICD-9-CM
944.33	Full-thickness skin loss due to burn (third degree NOS) of two or more digits of hand, not including thumb	Diagnosis	ICD-9-CM
944.34	Full-thickness skin loss due to burn (third degree NOS) of two or more digits of hand including thumb	Diagnosis	ICD-9-CM
944.35	Full-thickness skin loss due to burn (third degree NOS) of palm of hand	Diagnosis	ICD-9-CM
944.36	Full-thickness skin loss due to burn (third degree NOS) of back of hand	Diagnosis	ICD-9-CM
944.37	Full-thickness skin loss due to burn (third degree NOS) of wrist	Diagnosis	ICD-9-CM
944.38	Full-thickness skin loss due to burn (third degree NOS) of multiple sites of wrist(s) and hand(s)	Diagnosis	ICD-9-CM
944.4	Deep necrosis of underlying tissues due to burn (deep third degree) of wrist(s) and hand(s), without mention of loss of a body part	Diagnosis	ICD-9-CM
944.40	Deep necrosis of underlying tissues due to burn (deep third degree) of unspecified site of hand, without mention of loss of a body part	Diagnosis	ICD-9-CM
944.41	Deep necrosis of underlying tissues due to burn (deep third degree) of single digit [finger (nail)] other than thumb, without mention of loss of a body part	Diagnosis	ICD-9-CM
944.42	Deep necrosis of underlying tissues due to burn (deep third degree) of thumb (nail), without mention of loss of a body part	Diagnosis	ICD-9-CM
944.43	Deep necrosis of underlying tissues due to burn (deep third degree) of two or more digits of hand, not including thumb, without mention of loss of a body part	Diagnosis	ICD-9-CM
944.44	Deep necrosis of underlying tissues due to burn (deep third degree) of two or more digits of hand including thumb, without mention of loss of a body part	Diagnosis	ICD-9-CM
944.45	Deep necrosis of underlying tissues due to burn (deep third degree) of palm of hand, without mention of loss of a body part	Diagnosis	ICD-9-CM
944.46	Deep necrosis of underlying tissues due to burn (deep third degree) of back of hand, without mention of loss of a body part	Diagnosis	ICD-9-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
944.47	Deep necrosis of underlying tissues due to burn (deep third degree) of wrist, without mention of loss of a body part	Diagnosis	ICD-9-CM
944.48	Deep necrosis of underlying tissues due to burn (deep third degree) of multiple sites of wrist(s) and hand(s), without mention of loss of a body part	Diagnosis	ICD-9-CM
944.5	Deep necrosis of underlying tissues due to burn (deep third degree) of wrist(s) and hand(s), with loss of a body part	Diagnosis	ICD-9-CM
944.50	Deep necrosis of underlying tissues due to burn (deep third degree) of unspecified site of hand, with loss of a body part	Diagnosis	ICD-9-CM
944.51	Deep necrosis of underlying tissues due to burn (deep third degree) of single digit (finger (nail)) other than thumb, with loss of a body part	Diagnosis	ICD-9-CM
944.52	Deep necrosis of underlying tissues due to burn (deep third degree) of thumb (nail), with loss of a body part	Diagnosis	ICD-9-CM
944.53	Deep necrosis of underlying tissues due to burn (deep third degree) of two or more digits of hand, not including thumb, with loss of a body part	Diagnosis	ICD-9-CM
944.54	Deep necrosis of underlying tissues due to burn (deep third degree) of two or more digits of hand including thumb, with loss of a body part	Diagnosis	ICD-9-CM
944.55	Deep necrosis of underlying tissues due to burn (deep third degree) of palm of hand, with loss of a body part	Diagnosis	ICD-9-CM
944.56	Deep necrosis of underlying tissues due to burn (deep third degree) of back of hand, with loss of a body part	Diagnosis	ICD-9-CM
944.57	Deep necrosis of underlying tissues due to burn (deep third degree) of wrist, with loss of a body part	Diagnosis	ICD-9-CM
944.58	Deep necrosis of underlying tissues due to burn (deep third degree) of multiple sites of wrist(s) and hand(s), with loss of a body part	Diagnosis	ICD-9-CM
945	Burn of lower limb(s)	Diagnosis	ICD-9-CM
945.0	Burn of lower limb(s), unspecified degree	Diagnosis	ICD-9-CM
945.00	Burn of unspecified degree of unspecified site of lower limb (leg)	Diagnosis	ICD-9-CM
945.01	Burn of unspecified degree of toe(s) (nail)	Diagnosis	ICD-9-CM
945.02	Burn of unspecified degree of foot	Diagnosis	ICD-9-CM
945.03	Burn of unspecified degree of ankle	Diagnosis	ICD-9-CM
945.04	Burn of unspecified degree of lower leg	Diagnosis	ICD-9-CM
945.05	Burn of unspecified degree of knee	Diagnosis	ICD-9-CM
945.06	Burn of unspecified degree of thigh (any part)	Diagnosis	ICD-9-CM
945.09	Burn of unspecified degree of multiple sites of lower limb(s)	Diagnosis	ICD-9-CM
945.1	Erythema due to burn (first degree) of lower limb(s)	Diagnosis	ICD-9-CM
945.10	Erythema due to burn (first degree) of unspecified site of lower limb (leg)	Diagnosis	ICD-9-CM
945.11	Erythema due to burn (first degree) of toe(s) (nail)	Diagnosis	ICD-9-CM
945.12	Erythema due to burn (first degree) of foot	Diagnosis	ICD-9-CM
945.13	Erythema due to burn (first degree) of ankle	Diagnosis	ICD-9-CM
945.14	Erythema due to burn (first degree) of lower leg	Diagnosis	ICD-9-CM
945.15	Erythema due to burn (first degree) of knee	Diagnosis	ICD-9-CM
945.16	Erythema due to burn (first degree) of thigh (any part)	Diagnosis	ICD-9-CM
945.19	Erythema due to burn (first degree) of multiple sites of lower limb(s)	Diagnosis	ICD-9-CM
945.2	Blisters with epidermal loss due to burn (second degree) of lower limb(s)	Diagnosis	ICD-9-CM

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Code	Description	Code Category	Code Type
945.20	Blisters with epidermal loss due to burn (second degree) of unspecified site of lower limb (leg)	Diagnosis	ICD-9-CM
945.21	Blisters with epidermal loss due to burn (second degree) of toe(s) (nail)	Diagnosis	ICD-9-CM
945.22	Blisters with epidermal loss due to burn (second degree) of foot	Diagnosis	ICD-9-CM
945.23	Blisters with epidermal loss due to burn (second degree) of ankle	Diagnosis	ICD-9-CM
945.24	Blisters with epidermal loss due to burn (second degree) of lower leg	Diagnosis	ICD-9-CM
945.25	Blisters with epidermal loss due to burn (second degree) of knee	Diagnosis	ICD-9-CM
945.26	Blisters with epidermal loss due to burn (second degree) of thigh (any part)	Diagnosis	ICD-9-CM
945.29	Blisters with epidermal loss due to burn (second degree) of multiple sites of lower limb(s)	Diagnosis	ICD-9-CM
945.3	Full-thickness skin loss due to burn (third degree NOS) of lower limb(s)	Diagnosis	ICD-9-CM
945.30	Full-thickness skin loss due to burn (third degree NOS) of unspecified site of lower limb	Diagnosis	ICD-9-CM
945.31	Full-thickness skin loss due to burn (third degree NOS) of toe(s) (nail)	Diagnosis	ICD-9-CM
945.32	Full-thickness skin loss due to burn (third degree NOS) of foot	Diagnosis	ICD-9-CM
945.33	Full-thickness skin loss due to burn (third degree NOS) of ankle	Diagnosis	ICD-9-CM
945.34	Full-thickness skin loss due to burn (third degree NOS) of lower leg	Diagnosis	ICD-9-CM
945.35	Full-thickness skin loss due to burn (third degree NOS) of knee	Diagnosis	ICD-9-CM
945.36	Full-thickness skin loss due to burn (third degree NOS) of thigh (any part)	Diagnosis	ICD-9-CM
945.39	Full-thickness skin loss due to burn (third degree NOS) of multiple sites of lower limb(s)	Diagnosis	ICD-9-CM
945.4	Deep necrosis of underlying tissues due to burn (deep third degree) of lower limb(s) without mention of loss of a body part	Diagnosis	ICD-9-CM
945.40	Deep necrosis of underlying tissues due to burn (deep third degree) of unspecified site of lower limb (leg), without mention of loss of a body part	Diagnosis	ICD-9-CM
945.41	Deep necrosis of underlying tissues due to burn (deep third degree) of toe(s) (nail), without mention of loss of a body part	Diagnosis	ICD-9-CM
945.42	Deep necrosis of underlying tissues due to burn (deep third degree) of foot, without mention of loss of a body part	Diagnosis	ICD-9-CM
945.43	Deep necrosis of underlying tissues due to burn (deep third degree) of ankle, without mention of loss of a body part	Diagnosis	ICD-9-CM
945.44	Deep necrosis of underlying tissues due to burn (deep third degree) of lower leg, without mention of loss of a body part	Diagnosis	ICD-9-CM
945.45	Deep necrosis of underlying tissues due to burn (deep third degree) of knee, without mention of loss of a body part	Diagnosis	ICD-9-CM
945.46	Deep necrosis of underlying tissues due to burn (deep third degree) of thigh (any part), without mention of loss of a body part	Diagnosis	ICD-9-CM
945.49	Deep necrosis of underlying tissues due to burn (deep third degree) of multiple sites of lower limb(s), without mention of loss of a body part	Diagnosis	ICD-9-CM
945.5	Deep necrosis of underlying tissues due to burn (deep third degree) of lower limb(s) with loss of a body part	Diagnosis	ICD-9-CM
945.50	Deep necrosis of underlying tissues due to burn (deep third degree) of unspecified site lower limb (leg), with loss of a body part	Diagnosis	ICD-9-CM
945.51	Deep necrosis of underlying tissues due to burn (deep third degree) of toe(s) (nail), with loss of a body part	Diagnosis	ICD-9-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
945.52	Deep necrosis of underlying tissues due to burn (deep third degree) of foot, with loss of a body part	Diagnosis	ICD-9-CM
945.53	Deep necrosis of underlying tissues due to burn (deep third degree) of ankle, with loss of a body part	Diagnosis	ICD-9-CM
945.54	Deep necrosis of underlying tissues due to burn (deep third degree) of lower leg, with loss of a body part	Diagnosis	ICD-9-CM
945.55	Deep necrosis of underlying tissues due to burn (deep third degree) of knee, with loss of a body part	Diagnosis	ICD-9-CM
945.56	Deep necrosis of underlying tissues due to burn (deep third degree) of thigh (any part), with loss of a body part	Diagnosis	ICD-9-CM
945.59	Deep necrosis of underlying tissues due to burn (deep third degree) of multiple sites of lower limb(s), with loss of a body part	Diagnosis	ICD-9-CM
946	Burns of multiple specified sites	Diagnosis	ICD-9-CM
946.0	Burns of multiple specified sites, unspecified degree	Diagnosis	ICD-9-CM
946.1	Erythema due to burn (first degree) of multiple specified sites	Diagnosis	ICD-9-CM
946.2	Blisters with epidermal loss due to burn (second degree) of multiple specified sites	Diagnosis	ICD-9-CM
946.3	Full-thickness skin loss due to burn (third degree NOS) of multiple specified sites	Diagnosis	ICD-9-CM
946.4	Deep necrosis of underlying tissues due to burn (deep third degree) of multiple specified sites, without mention of loss of a body part	Diagnosis	ICD-9-CM
946.5	Deep necrosis of underlying tissues due to burn (deep third degree) of multiple specified sites, with loss of a body part	Diagnosis	ICD-9-CM
948	Burns classified according to extent of body surface involved	Diagnosis	ICD-9-CM
948.0	Burn (any degree) involving less than 10% of body surface	Diagnosis	ICD-9-CM
948.00	Burn (any degree) involving less than 10% of body surface with third degree burn of less than 10% or unspecified amount	Diagnosis	ICD-9-CM
948.1	Burn (any degree) involving 10-19% of body surface	Diagnosis	ICD-9-CM
948.10	Burn (any degree) involving 10-19% of body surface with third degree burn of less than 10% or unspecified amount	Diagnosis	ICD-9-CM
948.11	Burn (any degree) involving 10-19% of body surface with third degree burn of 10-19%	Diagnosis	ICD-9-CM
948.2	Burn (any degree) involving 20-29% of body surface	Diagnosis	ICD-9-CM
948.20	Burn (any degree) involving 20-29% of body surface with third degree burn of less than 10% or unspecified amount	Diagnosis	ICD-9-CM
948.21	Burn (any degree) involving 20-29% of body surface with third degree burn of 10-19%	Diagnosis	ICD-9-CM
948.22	Burn (any degree) involving 20-29% of body surface with third degree burn of 20-29%	Diagnosis	ICD-9-CM
948.3	Burn (any degree) involving 30-39% of body surface	Diagnosis	ICD-9-CM
948.30	Burn (any degree) involving 30-39% of body surface with third degree burn of less than 10% or unspecified amount	Diagnosis	ICD-9-CM
948.31	Burn (any degree) involving 30-39% of body surface with third degree burn of 10-19%	Diagnosis	ICD-9-CM
948.32	Burn (any degree) involving 30-39% of body surface with third degree burn of 20-29%	Diagnosis	ICD-9-CM

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Code	Description	Code Category	Code Type
948.33	Burn (any degree) involving 30-39% of body surface with third degree burn of 30-39%	Diagnosis	ICD-9-CM
948.4	Burn (any degree) involving 40-49% of body surface	Diagnosis	ICD-9-CM
948.40	Burn (any degree) involving 40-49% of body surface with third degree burn of less than 10% or unspecified amount	Diagnosis	ICD-9-CM
948.41	Burn (any degree) involving 40-49% of body surface with third degree burn of 10-19%	Diagnosis	ICD-9-CM
948.42	Burn (any degree) involving 40-49% of body surface with third degree burn of 20-29%	Diagnosis	ICD-9-CM
948.43	Burn (any degree) involving 40-49% of body surface with third degree burn of 30-39%	Diagnosis	ICD-9-CM
948.44	Burn (any degree) involving 40-49% of body surface with third degree burn of 40-49%	Diagnosis	ICD-9-CM
948.5	Burn (any degree) involving 50-59% of body surface	Diagnosis	ICD-9-CM
948.50	Burn (any degree) involving 50-59% of body surface with third degree burn of less than 10% or unspecified amount	Diagnosis	ICD-9-CM
948.51	Burn (any degree) involving 50-59% of body surface with third degree burn of 10-19%	Diagnosis	ICD-9-CM
948.52	Burn (any degree) involving 50-59% of body surface with third degree burn of 20-29%	Diagnosis	ICD-9-CM
948.53	Burn (any degree) involving 50-59% of body surface with third degree burn of 30-39%	Diagnosis	ICD-9-CM
948.54	Burn (any degree) involving 50-59% of body surface with third degree burn of 40-49%	Diagnosis	ICD-9-CM
948.55	Burn (any degree) involving 50-59% of body surface with third degree burn of 50-59%	Diagnosis	ICD-9-CM
948.6	Burn (any degree) involving 60-69% of body surface	Diagnosis	ICD-9-CM
948.60	Burn (any degree) involving 60-69% of body surface with third degree burn of less than 10% or unspecified amount	Diagnosis	ICD-9-CM
948.61	Burn (any degree) involving 60-69% of body surface with third degree burn of 10-19%	Diagnosis	ICD-9-CM
948.62	Burn (any degree) involving 60-69% of body surface with third degree burn of 20-29%	Diagnosis	ICD-9-CM
948.63	Burn (any degree) involving 60-69% of body surface with third degree burn of 30-39%	Diagnosis	ICD-9-CM
948.64	Burn (any degree) involving 60-69% of body surface with third degree burn of 40-49%	Diagnosis	ICD-9-CM
948.65	Burn (any degree) involving 60-69% of body surface with third degree burn of 50-59%	Diagnosis	ICD-9-CM
948.66	Burn (any degree) involving 60-69% of body surface with third degree burn of 60-69%	Diagnosis	ICD-9-CM
948.7	Burn (any degree) involving 70-79% of body surface	Diagnosis	ICD-9-CM
948.70	Burn (any degree) involving 70-79% of body surface with third degree burn of less than 10% or unspecified amount	Diagnosis	ICD-9-CM

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Code	Description	Code Category	Code Type
948.71	Burn (any degree) involving 70-79% of body surface with third degree burn of 10-19%	Diagnosis	ICD-9-CM
948.72	Burn (any degree) involving 70-79% of body surface with third degree burn of 20-29%	Diagnosis	ICD-9-CM
948.73	Burn (any degree) involving 70-79% of body surface with third degree burn of 30-39%	Diagnosis	ICD-9-CM
948.74	Burn (any degree) involving 70-79% of body surface with third degree burn of 40-49%	Diagnosis	ICD-9-CM
948.75	Burn (any degree) involving 70-79% of body surface with third degree burn of 50-59%	Diagnosis	ICD-9-CM
948.76	Burn (any degree) involving 70-79% of body surface with third degree burn of 60-69%	Diagnosis	ICD-9-CM
948.77	Burn (any degree) involving 70-79% of body surface with third degree burn of 70-79%	Diagnosis	ICD-9-CM
948.8	Burn (any degree) involving 80-89% of body surface	Diagnosis	ICD-9-CM
948.80	Burn (any degree) involving 80-89% of body surface with third degree burn of less than 10% or unspecified amount	Diagnosis	ICD-9-CM
948.81	Burn (any degree) involving 80-89% of body surface with third degree burn of 10-19%	Diagnosis	ICD-9-CM
948.82	Burn (any degree) involving 80-89% of body surface with third degree burn of 20-29%	Diagnosis	ICD-9-CM
948.83	Burn (any degree) involving 80-89% of body surface with third degree burn of 30-39%	Diagnosis	ICD-9-CM
948.84	Burn (any degree) involving 80-89% of body surface with third degree burn of 40-49%	Diagnosis	ICD-9-CM
948.85	Burn (any degree) involving 80-89% of body surface with third degree burn of 50-59%	Diagnosis	ICD-9-CM
948.86	Burn (any degree) involving 80-89% of body surface with third degree burn of 60-69%	Diagnosis	ICD-9-CM
948.87	Burn (any degree) involving 80-89% of body surface with third degree burn of 70-79%	Diagnosis	ICD-9-CM
948.88	Burn (any degree) involving 80-89% of body surface with third degree burn of 80-89%	Diagnosis	ICD-9-CM
948.9	Burn (any degree) involving 90% or more of body surface	Diagnosis	ICD-9-CM
948.90	Burn (any degree) involving 90% or more of body surface with third degree burn of less than 10% or unspecified amount	Diagnosis	ICD-9-CM
948.91	Burn (any degree) involving 90% or more of body surface with third degree burn of 10-19%	Diagnosis	ICD-9-CM
948.92	Burn (any degree) involving 90% or more of body surface with third degree burn of 20-29%	Diagnosis	ICD-9-CM
948.93	Burn (any degree) involving 90% or more of body surface with third degree burn of 30-39%	Diagnosis	ICD-9-CM
948.94	Burn (any degree) involving 90% or more of body surface with third degree burn of 40-49%	Diagnosis	ICD-9-CM

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Code	Description	Code Category	Code Type
948.95	Burn (any degree) involving 90% or more of body surface with third degree burn of 50-59%	Diagnosis	ICD-9-CM
948.96	Burn (any degree) involving 90% or more of body surface with third degree burn of 60-69%	Diagnosis	ICD-9-CM
948.97	Burn (any degree) involving 90% or more of body surface with third degree burn of 70-79%	Diagnosis	ICD-9-CM
948.98	Burn (any degree) involving 90% or more of body surface with third degree burn of 80-89%	Diagnosis	ICD-9-CM
948.99	Burn (any degree) involving 90% or more of body surface with third degree burn of 90% or more of body surface	Diagnosis	ICD-9-CM
949	Burn, unspecified site	Diagnosis	ICD-9-CM
949.0	Burn of unspecified site, unspecified degree	Diagnosis	ICD-9-CM
949.1	Erythema due to burn (first degree), unspecified site	Diagnosis	ICD-9-CM
949.2	Blisters with epidermal loss due to burn (second degree), unspecified site	Diagnosis	ICD-9-CM
949.3	Full-thickness skin loss due to burn (third degree NOS), unspecified site	Diagnosis	ICD-9-CM
949.4	Deep necrosis of underlying tissue due to burn (deep third degree), unspecified site without mention of loss of body part	Diagnosis	ICD-9-CM
949.5	Deep necrosis of underlying tissues due to burn (deep third degree, unspecified site with loss of body part	Diagnosis	ICD-9-CM
E803	Railway accident involving explosion, fire, or burning	Diagnosis	ICD-9-CM
E803.0	Railway accident involving explosion, fire, or burning, injuring railway employee	Diagnosis	ICD-9-CM
E803.1	Railway accident involving explosion, fire, or burning, injuring passenger on railway	Diagnosis	ICD-9-CM
E803.2	Railway accident involving explosion, fire, or burning, injuring pedestrian	Diagnosis	ICD-9-CM
E803.3	Railway accident involving explosion, fire, or burning, injuring pedal cyclist	Diagnosis	ICD-9-CM
E803.8	Railway accident involving explosion, fire, or burning, injuring other specified	Diagnosis	ICD-9-CM
E803.9	Railway accident involving explosion, fire, or burning, injuring unspecified person	Diagnosis	ICD-9-CM
E837	Explosion, fire, or burning in watercraft	Diagnosis	ICD-9-CM
E837.0	Explosion, fire, or burning in watercraft injuring occupant of small unpowered boat	Diagnosis	ICD-9-CM
E837.1	Explosion, fire, or burning in watercraft injuring occupant of small powered boat	Diagnosis	ICD-9-CM
E837.2	Explosion, fire, or burning in watercraft injuring occupant of other watercraft, crew	Diagnosis	ICD-9-CM
E837.3	Explosion, fire, or burning in watercraft injuring occupant of other watercraft, other than crew	Diagnosis	ICD-9-CM
E837.4	Explosion, fire, or burning in watercraft injuring water skier	Diagnosis	ICD-9-CM
E837.5	Explosion, fire, or burning in watercraft injuring swimmer	Diagnosis	ICD-9-CM
E837.6	Explosion, fire, or burning in watercraft injuring dockers, stevedores	Diagnosis	ICD-9-CM
E837.7	Explosion, fire, or burning in watercraft, occupant of military watercraft, any type	Diagnosis	ICD-9-CM
E837.8	Explosion, fire, or burning in watercraft injuring other specified person	Diagnosis	ICD-9-CM
E837.9	Explosion, fire, or burning in watercraft injuring unspecified person	Diagnosis	ICD-9-CM
E890.3	Burning caused by conflagration in private dwelling	Diagnosis	ICD-9-CM
E891.3	Burning caused by conflagration in other and unspecified building or structure	Diagnosis	ICD-9-CM
E898.0	Accident caused by burning bedclothes	Diagnosis	ICD-9-CM
E898.1	Accident caused by other burning materials	Diagnosis	ICD-9-CM
E958.1	Suicide and self-inflicted injury by burns, fire	Diagnosis	ICD-9-CM
E988.1	Injury by burns or fire, undetermined whether accidentally or purposely inflicted	Diagnosis	ICD-9-CM
M61.3	Calcification and ossification of muscles associated with burns	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
M61.30	Calcification and ossification of muscles associated with burns, unspecified site	Diagnosis	ICD-10-CM
M61.31	Calcification and ossification of muscles associated with burns, shoulder	Diagnosis	ICD-10-CM
M61.311	Calcification and ossification of muscles associated with burns, right shoulder	Diagnosis	ICD-10-CM
M61.312	Calcification and ossification of muscles associated with burns, left shoulder	Diagnosis	ICD-10-CM
M61.319	Calcification and ossification of muscles associated with burns, unspecified	Diagnosis	ICD-10-CM
M61.32	Calcification and ossification of muscles associated with burns, upper arm	Diagnosis	ICD-10-CM
M61.321	Calcification and ossification of muscles associated with burns, right upper arm	Diagnosis	ICD-10-CM
M61.322	Calcification and ossification of muscles associated with burns, left upper arm	Diagnosis	ICD-10-CM
M61.329	Calcification and ossification of muscles associated with burns, unspecified upper arm	Diagnosis	ICD-10-CM
M61.33	Calcification and ossification of muscles associated with burns, forearm	Diagnosis	ICD-10-CM
M61.331	Calcification and ossification of muscles associated with burns, right forearm	Diagnosis	ICD-10-CM
M61.332	Calcification and ossification of muscles associated with burns, left forearm	Diagnosis	ICD-10-CM
M61.339	Calcification and ossification of muscles associated with burns, unspecified forearm	Diagnosis	ICD-10-CM
M61.34	Calcification and ossification of muscles associated with burns, hand	Diagnosis	ICD-10-CM
M61.341	Calcification and ossification of muscles associated with burns, right hand	Diagnosis	ICD-10-CM
M61.342	Calcification and ossification of muscles associated with burns, left hand	Diagnosis	ICD-10-CM
M61.349	Calcification and ossification of muscles associated with burns, unspecified hand	Diagnosis	ICD-10-CM
M61.35	Calcification and ossification of muscles associated with burns, thigh	Diagnosis	ICD-10-CM
M61.351	Calcification and ossification of muscles associated with burns, right thigh	Diagnosis	ICD-10-CM
M61.352	Calcification and ossification of muscles associated with burns, left thigh	Diagnosis	ICD-10-CM
M61.359	Calcification and ossification of muscles associated with burns, unspecified thigh	Diagnosis	ICD-10-CM
M61.36	Calcification and ossification of muscles associated with burns, lower leg	Diagnosis	ICD-10-CM
M61.361	Calcification and ossification of muscles associated with burns, right lower leg	Diagnosis	ICD-10-CM
M61.362	Calcification and ossification of muscles associated with burns, left lower leg	Diagnosis	ICD-10-CM
M61.369	Calcification and ossification of muscles associated with burns, unspecified lower	Diagnosis	ICD-10-CM
M61.37	Calcification and ossification of muscles associated with burns, ankle and foot	Diagnosis	ICD-10-CM
M61.371	Calcification and ossification of muscles associated with burns, right ankle and foot	Diagnosis	ICD-10-CM
M61.372	Calcification and ossification of muscles associated with burns, left ankle and foot	Diagnosis	ICD-10-CM
M61.379	Calcification and ossification of muscles associated with burns, unspecified ankle and foot	Diagnosis	ICD-10-CM
M61.38	Calcification and ossification of muscles associated with burns, other site	Diagnosis	ICD-10-CM
M61.39	Calcification and ossification of muscles associated with burns, multiple sites	Diagnosis	ICD-10-CM
T20	Burn and corrosion of head, face, and neck	Diagnosis	ICD-10-CM
T20.0	Burn of unspecified degree of head, face, and neck	Diagnosis	ICD-10-CM
T20.00	Burn of unspecified degree of head, face, and neck, unspecified site	Diagnosis	ICD-10-CM
T20.00XA	Burn of unspecified degree of head, face, and neck, unspecified site, initial	Diagnosis	ICD-10-CM
T20.00XD	Burn of unspecified degree of head, face, and neck, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T20.00XS	Burn of unspecified degree of head, face, and neck, unspecified site, sequela	Diagnosis	ICD-10-CM
T20.01	Burn of unspecified degree of ear [any part, except ear drum]	Diagnosis	ICD-10-CM
T20.011	Burn of unspecified degree of right ear [any part, except ear drum]	Diagnosis	ICD-10-CM
T20.011A	Burn of unspecified degree of right ear [any part, except ear drum], initial	Diagnosis	ICD-10-CM
T20.011D	Burn of unspecified degree of right ear [any part, except ear drum], subsequent encounter	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
T20.011S	Burn of unspecified degree of right ear [any part, except ear drum], sequela	Diagnosis	ICD-10-CM
T20.012	Burn of unspecified degree of left ear [any part, except ear drum]	Diagnosis	ICD-10-CM
T20.012A	Burn of unspecified degree of left ear [any part, except ear drum], initial encounter	Diagnosis	ICD-10-CM
T20.012D	Burn of unspecified degree of left ear [any part, except ear drum], subsequent encounter	Diagnosis	ICD-10-CM
T20.012S	Burn of unspecified degree of left ear [any part, except ear drum], sequela	Diagnosis	ICD-10-CM
T20.019	Burn of unspecified degree of unspecified ear [any part, except ear drum]	Diagnosis	ICD-10-CM
T20.019A	Burn of unspecified degree of unspecified ear [any part, except ear drum], initial encounter	Diagnosis	ICD-10-CM
T20.019D	Burn of unspecified degree of unspecified ear [any part, except ear drum], subsequent encounter	Diagnosis	ICD-10-CM
T20.019S	Burn of unspecified degree of unspecified ear [any part, except ear drum], sequela	Diagnosis	ICD-10-CM
T20.02	Burn of unspecified degree of lip(s)	Diagnosis	ICD-10-CM
T20.02XA	Burn of unspecified degree of lip(s), initial encounter	Diagnosis	ICD-10-CM
T20.02XD	Burn of unspecified degree of lip(s), subsequent encounter	Diagnosis	ICD-10-CM
T20.02XS	Burn of unspecified degree of lip(s), sequela	Diagnosis	ICD-10-CM
T20.03	Burn of unspecified degree of chin	Diagnosis	ICD-10-CM
T20.03XA	Burn of unspecified degree of chin, initial encounter	Diagnosis	ICD-10-CM
T20.03XD	Burn of unspecified degree of chin, subsequent encounter	Diagnosis	ICD-10-CM
T20.03XS	Burn of unspecified degree of chin, sequela	Diagnosis	ICD-10-CM
T20.04	Burn of unspecified degree of nose (septum)	Diagnosis	ICD-10-CM
T20.04XA	Burn of unspecified degree of nose (septum), initial encounter	Diagnosis	ICD-10-CM
T20.04XD	Burn of unspecified degree of nose (septum), subsequent encounter	Diagnosis	ICD-10-CM
T20.04XS	Burn of unspecified degree of nose (septum), sequela	Diagnosis	ICD-10-CM
T20.05	Burn of unspecified degree of scalp [any part]	Diagnosis	ICD-10-CM
T20.05XA	Burn of unspecified degree of scalp [any part], initial encounter	Diagnosis	ICD-10-CM
T20.05XD	Burn of unspecified degree of scalp [any part], subsequent encounter	Diagnosis	ICD-10-CM
T20.05XS	Burn of unspecified degree of scalp [any part], sequela	Diagnosis	ICD-10-CM
T20.06	Burn of unspecified degree of forehead and cheek	Diagnosis	ICD-10-CM
T20.06XA	Burn of unspecified degree of forehead and cheek, initial encounter	Diagnosis	ICD-10-CM
T20.06XD	Burn of unspecified degree of forehead and cheek, subsequent encounter	Diagnosis	ICD-10-CM
T20.06XS	Burn of unspecified degree of forehead and cheek, sequela	Diagnosis	ICD-10-CM
T20.07	Burn of unspecified degree of neck	Diagnosis	ICD-10-CM
T20.07XA	Burn of unspecified degree of neck, initial encounter	Diagnosis	ICD-10-CM
T20.07XD	Burn of unspecified degree of neck, subsequent encounter	Diagnosis	ICD-10-CM
T20.07XS	Burn of unspecified degree of neck, sequela	Diagnosis	ICD-10-CM
T20.09	Burn of unspecified degree of multiple sites of head, face, and neck	Diagnosis	ICD-10-CM
T20.09XA	Burn of unspecified degree of multiple sites of head, face, and neck, initial encounter	Diagnosis	ICD-10-CM
T20.09XD	Burn of unspecified degree of multiple sites of head, face, and neck, subsequent encounter	Diagnosis	ICD-10-CM
T20.09XS	Burn of unspecified degree of multiple sites of head, face, and neck, sequela	Diagnosis	ICD-10-CM
T20.1	Burn of first degree of head, face, and neck	Diagnosis	ICD-10-CM
T20.10	Burn of first degree of head, face, and neck, unspecified site	Diagnosis	ICD-10-CM
T20.10XA	Burn of first degree of head, face, and neck, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T20.10XD	Burn of first degree of head, face, and neck, unspecified site, subsequent	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
T20.10XS	Burn of first degree of head, face, and neck, unspecified site, sequela	Diagnosis	ICD-10-CM
T20.11	Burn of first degree of ear [any part, except ear drum]	Diagnosis	ICD-10-CM
T20.111	Burn of first degree of right ear [any part, except ear drum]	Diagnosis	ICD-10-CM
T20.111A	Burn of first degree of right ear [any part, except ear drum], initial encounter	Diagnosis	ICD-10-CM
T20.111D	Burn of first degree of right ear [any part, except ear drum], subsequent encounter	Diagnosis	ICD-10-CM
T20.111S	Burn of first degree of right ear [any part, except ear drum], sequela	Diagnosis	ICD-10-CM
T20.112	Burn of first degree of left ear [any part, except ear drum]	Diagnosis	ICD-10-CM
T20.112A	Burn of first degree of left ear [any part, except ear drum], initial encounter	Diagnosis	ICD-10-CM
T20.112D	Burn of first degree of left ear [any part, except ear drum], subsequent encounter	Diagnosis	ICD-10-CM
T20.112S	Burn of first degree of left ear [any part, except ear drum], sequela	Diagnosis	ICD-10-CM
T20.119	Burn of first degree of unspecified ear [any part, except ear drum]	Diagnosis	ICD-10-CM
T20.119A	Burn of first degree of unspecified ear [any part, except ear drum], initial	Diagnosis	ICD-10-CM
T20.119D	Burn of first degree of unspecified ear [any part, except ear drum], subsequent encounter	Diagnosis	ICD-10-CM
T20.119S	Burn of first degree of unspecified ear [any part, except ear drum], sequela	Diagnosis	ICD-10-CM
T20.12	Burn of first degree of lip(s)	Diagnosis	ICD-10-CM
T20.12XA	Burn of first degree of lip(s), initial encounter	Diagnosis	ICD-10-CM
T20.12XD	Burn of first degree of lip(s), subsequent encounter	Diagnosis	ICD-10-CM
T20.12XS	Burn of first degree of lip(s), sequela	Diagnosis	ICD-10-CM
T20.13	Burn of first degree of chin	Diagnosis	ICD-10-CM
T20.13XA	Burn of first degree of chin, initial encounter	Diagnosis	ICD-10-CM
T20.13XD	Burn of first degree of chin, subsequent encounter	Diagnosis	ICD-10-CM
T20.13XS	Burn of first degree of chin, sequela	Diagnosis	ICD-10-CM
T20.14	Burn of first degree of nose (septum)	Diagnosis	ICD-10-CM
T20.14XA	Burn of first degree of nose (septum), initial encounter	Diagnosis	ICD-10-CM
T20.14XD	Burn of first degree of nose (septum), subsequent encounter	Diagnosis	ICD-10-CM
T20.14XS	Burn of first degree of nose (septum), sequela	Diagnosis	ICD-10-CM
T20.15	Burn of first degree of scalp [any part]	Diagnosis	ICD-10-CM
T20.15XA	Burn of first degree of scalp [any part], initial encounter	Diagnosis	ICD-10-CM
T20.15XD	Burn of first degree of scalp [any part], subsequent encounter	Diagnosis	ICD-10-CM
T20.15XS	Burn of first degree of scalp [any part], sequela	Diagnosis	ICD-10-CM
T20.16	Burn of first degree of forehead and cheek	Diagnosis	ICD-10-CM
T20.16XA	Burn of first degree of forehead and cheek, initial encounter	Diagnosis	ICD-10-CM
T20.16XD	Burn of first degree of forehead and cheek, subsequent encounter	Diagnosis	ICD-10-CM
T20.16XS	Burn of first degree of forehead and cheek, sequela	Diagnosis	ICD-10-CM
T20.17	Burn of first degree of neck	Diagnosis	ICD-10-CM
T20.17XA	Burn of first degree of neck, initial encounter	Diagnosis	ICD-10-CM
T20.17XD	Burn of first degree of neck, subsequent encounter	Diagnosis	ICD-10-CM
T20.17XS	Burn of first degree of neck, sequela	Diagnosis	ICD-10-CM
T20.19	Burn of first degree of multiple sites of head, face, and neck	Diagnosis	ICD-10-CM
T20.19XA	Burn of first degree of multiple sites of head, face, and neck, initial encounter	Diagnosis	ICD-10-CM
T20.19XD	Burn of first degree of multiple sites of head, face, and neck, subsequent	Diagnosis	ICD-10-CM
T20.19XS	Burn of first degree of multiple sites of head, face, and neck, sequela	Diagnosis	ICD-10-CM
T20.2	Burn of second degree of head, face, and neck	Diagnosis	ICD-10-CM
T20.20	Burn of second degree of head, face, and neck, unspecified site	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T20.20XA	Burn of second degree of head, face, and neck, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T20.20XD	Burn of second degree of head, face, and neck, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T20.20XS	Burn of second degree of head, face, and neck, unspecified site, sequela	Diagnosis	ICD-10-CM
T20.21	Burn of second degree of ear [any part, except ear drum]	Diagnosis	ICD-10-CM
T20.211	Burn of second degree of right ear [any part, except ear drum]	Diagnosis	ICD-10-CM
T20.211A	Burn of second degree of right ear [any part, except ear drum], initial encounter	Diagnosis	ICD-10-CM
T20.211D	Burn of second degree of right ear [any part, except ear drum], subsequent encounter	Diagnosis	ICD-10-CM
T20.211S	Burn of second degree of right ear [any part, except ear drum], sequela	Diagnosis	ICD-10-CM
T20.212	Burn of second degree of left ear [any part, except ear drum]	Diagnosis	ICD-10-CM
T20.212A	Burn of second degree of left ear [any part, except ear drum], initial encounter	Diagnosis	ICD-10-CM
T20.212D	Burn of second degree of left ear [any part, except ear drum], subsequent encounter	Diagnosis	ICD-10-CM
T20.212S	Burn of second degree of left ear [any part, except ear drum], sequela	Diagnosis	ICD-10-CM
T20.219	Burn of second degree of unspecified ear [any part, except ear drum]	Diagnosis	ICD-10-CM
T20.219A	Burn of second degree of unspecified ear [any part, except ear drum], initial encounter	Diagnosis	ICD-10-CM
T20.219D	Burn of second degree of unspecified ear [any part, except ear drum], subsequent encounter	Diagnosis	ICD-10-CM
T20.219S	Burn of second degree of unspecified ear [any part, except ear drum], sequela	Diagnosis	ICD-10-CM
T20.22	Burn of second degree of lip(s)	Diagnosis	ICD-10-CM
T20.22XA	Burn of second degree of lip(s), initial encounter	Diagnosis	ICD-10-CM
T20.22XD	Burn of second degree of lip(s), subsequent encounter	Diagnosis	ICD-10-CM
T20.22XS	Burn of second degree of lip(s), sequela	Diagnosis	ICD-10-CM
T20.23	Burn of second degree of chin	Diagnosis	ICD-10-CM
T20.23XA	Burn of second degree of chin, initial encounter	Diagnosis	ICD-10-CM
T20.23XD	Burn of second degree of chin, subsequent encounter	Diagnosis	ICD-10-CM
T20.23XS	Burn of second degree of chin, sequela	Diagnosis	ICD-10-CM
T20.24	Burn of second degree of nose (septum)	Diagnosis	ICD-10-CM
T20.24XA	Burn of second degree of nose (septum), initial encounter	Diagnosis	ICD-10-CM
T20.24XD	Burn of second degree of nose (septum), subsequent encounter	Diagnosis	ICD-10-CM
T20.24XS	Burn of second degree of nose (septum), sequela	Diagnosis	ICD-10-CM
T20.25	Burn of second degree of scalp [any part]	Diagnosis	ICD-10-CM
T20.25XA	Burn of second degree of scalp [any part], initial encounter	Diagnosis	ICD-10-CM
T20.25XD	Burn of second degree of scalp [any part], subsequent encounter	Diagnosis	ICD-10-CM
T20.25XS	Burn of second degree of scalp [any part], sequela	Diagnosis	ICD-10-CM
T20.26	Burn of second degree of forehead and cheek	Diagnosis	ICD-10-CM
T20.26XA	Burn of second degree of forehead and cheek, initial encounter	Diagnosis	ICD-10-CM
T20.26XD	Burn of second degree of forehead and cheek, subsequent encounter	Diagnosis	ICD-10-CM
T20.26XS	Burn of second degree of forehead and cheek, sequela	Diagnosis	ICD-10-CM
T20.27	Burn of second degree of neck	Diagnosis	ICD-10-CM
T20.27XA	Burn of second degree of neck, initial encounter	Diagnosis	ICD-10-CM
T20.27XD	Burn of second degree of neck, subsequent encounter	Diagnosis	ICD-10-CM
T20.27XS	Burn of second degree of neck, sequela	Diagnosis	ICD-10-CM
T20.29	Burn of second degree of multiple sites of head, face, and neck	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T20.29XA	Burn of second degree of multiple sites of head, face, and neck, initial encounter	Diagnosis	ICD-10-CM
T20.29XD	Burn of second degree of multiple sites of head, face, and neck, subsequent encounter	Diagnosis	ICD-10-CM
T20.29XS	Burn of second degree of multiple sites of head, face, and neck, sequela	Diagnosis	ICD-10-CM
T20.3	Burn of third degree of head, face, and neck	Diagnosis	ICD-10-CM
T20.30	Burn of third degree of head, face, and neck, unspecified site	Diagnosis	ICD-10-CM
T20.30XA	Burn of third degree of head, face, and neck, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T20.30XD	Burn of third degree of head, face, and neck, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T20.30XS	Burn of third degree of head, face, and neck, unspecified site, sequela	Diagnosis	ICD-10-CM
T20.31	Burn of third degree of ear [any part, except ear drum]	Diagnosis	ICD-10-CM
T20.311	Burn of third degree of right ear [any part, except ear drum]	Diagnosis	ICD-10-CM
T20.311A	Burn of third degree of right ear [any part, except ear drum], initial encounter	Diagnosis	ICD-10-CM
T20.311D	Burn of third degree of right ear [any part, except ear drum], subsequent encounter	Diagnosis	ICD-10-CM
T20.311S	Burn of third degree of right ear [any part, except ear drum], sequela	Diagnosis	ICD-10-CM
T20.312	Burn of third degree of left ear [any part, except ear drum]	Diagnosis	ICD-10-CM
T20.312A	Burn of third degree of left ear [any part, except ear drum], initial encounter	Diagnosis	ICD-10-CM
T20.312D	Burn of third degree of left ear [any part, except ear drum], subsequent encounter	Diagnosis	ICD-10-CM
T20.312S	Burn of third degree of left ear [any part, except ear drum], sequela	Diagnosis	ICD-10-CM
T20.319	Burn of third degree of unspecified ear [any part, except ear drum]	Diagnosis	ICD-10-CM
T20.319A	Burn of third degree of unspecified ear [any part, except ear drum], initial encounter	Diagnosis	ICD-10-CM
T20.319D	Burn of third degree of unspecified ear [any part, except ear drum], subsequent encounter	Diagnosis	ICD-10-CM
T20.319S	Burn of third degree of unspecified ear [any part, except ear drum], sequela	Diagnosis	ICD-10-CM
T20.32	Burn of third degree of lip(s)	Diagnosis	ICD-10-CM
T20.32XA	Burn of third degree of lip(s), initial encounter	Diagnosis	ICD-10-CM
T20.32XD	Burn of third degree of lip(s), subsequent encounter	Diagnosis	ICD-10-CM
T20.32XS	Burn of third degree of lip(s), sequela	Diagnosis	ICD-10-CM
T20.33	Burn of third degree of chin	Diagnosis	ICD-10-CM
T20.33XA	Burn of third degree of chin, initial encounter	Diagnosis	ICD-10-CM
T20.33XD	Burn of third degree of chin, subsequent encounter	Diagnosis	ICD-10-CM
T20.33XS	Burn of third degree of chin, sequela	Diagnosis	ICD-10-CM
T20.34	Burn of third degree of nose (septum)	Diagnosis	ICD-10-CM
T20.34XA	Burn of third degree of nose (septum), initial encounter	Diagnosis	ICD-10-CM
T20.34XD	Burn of third degree of nose (septum), subsequent encounter	Diagnosis	ICD-10-CM
T20.34XS	Burn of third degree of nose (septum), sequela	Diagnosis	ICD-10-CM
T20.35	Burn of third degree of scalp [any part]	Diagnosis	ICD-10-CM
T20.35XA	Burn of third degree of scalp [any part], initial encounter	Diagnosis	ICD-10-CM
T20.35XD	Burn of third degree of scalp [any part], subsequent encounter	Diagnosis	ICD-10-CM
T20.35XS	Burn of third degree of scalp [any part], sequela	Diagnosis	ICD-10-CM
T20.36	Burn of third degree of forehead and cheek	Diagnosis	ICD-10-CM
T20.36XA	Burn of third degree of forehead and cheek, initial encounter	Diagnosis	ICD-10-CM
T20.36XD	Burn of third degree of forehead and cheek, subsequent encounter	Diagnosis	ICD-10-CM
T20.36XS	Burn of third degree of forehead and cheek, sequela	Diagnosis	ICD-10-CM
T20.37	Burn of third degree of neck	Diagnosis	ICD-10-CM
T20.37XA	Burn of third degree of neck, initial encounter	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T20.37XD	Burn of third degree of neck, subsequent encounter	Diagnosis	ICD-10-CM
T20.37XS	Burn of third degree of neck, sequela	Diagnosis	ICD-10-CM
T20.39	Burn of third degree of multiple sites of head, face, and neck	Diagnosis	ICD-10-CM
T20.39XA	Burn of third degree of multiple sites of head, face, and neck, initial encounter	Diagnosis	ICD-10-CM
T20.39XD	Burn of third degree of multiple sites of head, face, and neck, subsequent	Diagnosis	ICD-10-CM
T20.39XS	Burn of third degree of multiple sites of head, face, and neck, sequela	Diagnosis	ICD-10-CM
T21	Burn and corrosion of trunk	Diagnosis	ICD-10-CM
T21.0	Burn of unspecified degree of trunk	Diagnosis	ICD-10-CM
T21.00	Burn of unspecified degree of trunk, unspecified site	Diagnosis	ICD-10-CM
T21.00XA	Burn of unspecified degree of trunk, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T21.00XD	Burn of unspecified degree of trunk, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T21.00XS	Burn of unspecified degree of trunk, unspecified site, sequela	Diagnosis	ICD-10-CM
T21.01	Burn of unspecified degree of chest wall	Diagnosis	ICD-10-CM
T21.01XA	Burn of unspecified degree of chest wall, initial encounter	Diagnosis	ICD-10-CM
T21.01XD	Burn of unspecified degree of chest wall, subsequent encounter	Diagnosis	ICD-10-CM
T21.01XS	Burn of unspecified degree of chest wall, sequela	Diagnosis	ICD-10-CM
T21.02	Burn of unspecified degree of abdominal wall	Diagnosis	ICD-10-CM
T21.02XA	Burn of unspecified degree of abdominal wall, initial encounter	Diagnosis	ICD-10-CM
T21.02XD	Burn of unspecified degree of abdominal wall, subsequent encounter	Diagnosis	ICD-10-CM
T21.02XS	Burn of unspecified degree of abdominal wall, sequela	Diagnosis	ICD-10-CM
T21.03	Burn of unspecified degree of upper back	Diagnosis	ICD-10-CM
T21.03XA	Burn of unspecified degree of upper back, initial encounter	Diagnosis	ICD-10-CM
T21.03XD	Burn of unspecified degree of upper back, subsequent encounter	Diagnosis	ICD-10-CM
T21.03XS	Burn of unspecified degree of upper back, sequela	Diagnosis	ICD-10-CM
T21.04	Burn of unspecified degree of lower back	Diagnosis	ICD-10-CM
T21.04XA	Burn of unspecified degree of lower back, initial encounter	Diagnosis	ICD-10-CM
T21.04XD	Burn of unspecified degree of lower back, subsequent encounter	Diagnosis	ICD-10-CM
T21.04XS	Burn of unspecified degree of lower back, sequela	Diagnosis	ICD-10-CM
T21.05	Burn of unspecified degree of buttock	Diagnosis	ICD-10-CM
T21.05XA	Burn of unspecified degree of buttock, initial encounter	Diagnosis	ICD-10-CM
T21.05XD	Burn of unspecified degree of buttock, subsequent encounter	Diagnosis	ICD-10-CM
T21.05XS	Burn of unspecified degree of buttock, sequela	Diagnosis	ICD-10-CM
T21.06	Burn of unspecified degree of male genital region	Diagnosis	ICD-10-CM
T21.06XA	Burn of unspecified degree of male genital region, initial encounter	Diagnosis	ICD-10-CM
T21.06XD	Burn of unspecified degree of male genital region, subsequent encounter	Diagnosis	ICD-10-CM
T21.06XS	Burn of unspecified degree of male genital region, sequela	Diagnosis	ICD-10-CM
T21.07	Burn of unspecified degree of female genital region	Diagnosis	ICD-10-CM
T21.07XA	Burn of unspecified degree of female genital region, initial encounter	Diagnosis	ICD-10-CM
T21.07XD	Burn of unspecified degree of female genital region, subsequent encounter	Diagnosis	ICD-10-CM
T21.07XS	Burn of unspecified degree of female genital region, sequela	Diagnosis	ICD-10-CM
T21.09	Burn of unspecified degree of other site of trunk	Diagnosis	ICD-10-CM
T21.09XA	Burn of unspecified degree of other site of trunk, initial encounter	Diagnosis	ICD-10-CM
T21.09XD	Burn of unspecified degree of other site of trunk, subsequent encounter	Diagnosis	ICD-10-CM
T21.09XS	Burn of unspecified degree of other site of trunk, sequela	Diagnosis	ICD-10-CM
T21.1	Burn of first degree of trunk	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T21.10	Burn of first degree of trunk, unspecified site	Diagnosis	ICD-10-CM
T21.10XA	Burn of first degree of trunk, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T21.10XD	Burn of first degree of trunk, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T21.10XS	Burn of first degree of trunk, unspecified site, sequela	Diagnosis	ICD-10-CM
T21.11	Burn of first degree of chest wall	Diagnosis	ICD-10-CM
T21.11XA	Burn of first degree of chest wall, initial encounter	Diagnosis	ICD-10-CM
T21.11XD	Burn of first degree of chest wall, subsequent encounter	Diagnosis	ICD-10-CM
T21.11XS	Burn of first degree of chest wall, sequela	Diagnosis	ICD-10-CM
T21.12	Burn of first degree of abdominal wall	Diagnosis	ICD-10-CM
T21.12XA	Burn of first degree of abdominal wall, initial encounter	Diagnosis	ICD-10-CM
T21.12XD	Burn of first degree of abdominal wall, subsequent encounter	Diagnosis	ICD-10-CM
T21.12XS	Burn of first degree of abdominal wall, sequela	Diagnosis	ICD-10-CM
T21.13	Burn of first degree of upper back	Diagnosis	ICD-10-CM
T21.13XA	Burn of first degree of upper back, initial encounter	Diagnosis	ICD-10-CM
T21.13XD	Burn of first degree of upper back, subsequent encounter	Diagnosis	ICD-10-CM
T21.13XS	Burn of first degree of upper back, sequela	Diagnosis	ICD-10-CM
T21.14	Burn of first degree of lower back	Diagnosis	ICD-10-CM
T21.14XA	Burn of first degree of lower back, initial encounter	Diagnosis	ICD-10-CM
T21.14XD	Burn of first degree of lower back, subsequent encounter	Diagnosis	ICD-10-CM
T21.14XS	Burn of first degree of lower back, sequela	Diagnosis	ICD-10-CM
T21.15	Burn of first degree of buttock	Diagnosis	ICD-10-CM
T21.15XA	Burn of first degree of buttock, initial encounter	Diagnosis	ICD-10-CM
T21.15XD	Burn of first degree of buttock, subsequent encounter	Diagnosis	ICD-10-CM
T21.15XS	Burn of first degree of buttock, sequela	Diagnosis	ICD-10-CM
T21.16	Burn of first degree of male genital region	Diagnosis	ICD-10-CM
T21.16XA	Burn of first degree of male genital region, initial encounter	Diagnosis	ICD-10-CM
T21.16XD	Burn of first degree of male genital region, subsequent encounter	Diagnosis	ICD-10-CM
T21.16XS	Burn of first degree of male genital region, sequela	Diagnosis	ICD-10-CM
T21.17	Burn of first degree of female genital region	Diagnosis	ICD-10-CM
T21.17XA	Burn of first degree of female genital region, initial encounter	Diagnosis	ICD-10-CM
T21.17XD	Burn of first degree of female genital region, subsequent encounter	Diagnosis	ICD-10-CM
T21.17XS	Burn of first degree of female genital region, sequela	Diagnosis	ICD-10-CM
T21.19	Burn of first degree of other site of trunk	Diagnosis	ICD-10-CM
T21.19XA	Burn of first degree of other site of trunk, initial encounter	Diagnosis	ICD-10-CM
T21.19XD	Burn of first degree of other site of trunk, subsequent encounter	Diagnosis	ICD-10-CM
T21.19XS	Burn of first degree of other site of trunk, sequela	Diagnosis	ICD-10-CM
T21.2	Burn of second degree of trunk	Diagnosis	ICD-10-CM
T21.20	Burn of second degree of trunk, unspecified site	Diagnosis	ICD-10-CM
T21.20XA	Burn of second degree of trunk, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T21.20XD	Burn of second degree of trunk, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T21.20XS	Burn of second degree of trunk, unspecified site, sequela	Diagnosis	ICD-10-CM
T21.21	Burn of second degree of chest wall	Diagnosis	ICD-10-CM
T21.21XA	Burn of second degree of chest wall, initial encounter	Diagnosis	ICD-10-CM
T21.21XD	Burn of second degree of chest wall, subsequent encounter	Diagnosis	ICD-10-CM
T21.21XS	Burn of second degree of chest wall, sequela	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T21.22	Burn of second degree of abdominal wall	Diagnosis	ICD-10-CM
T21.22XA	Burn of second degree of abdominal wall, initial encounter	Diagnosis	ICD-10-CM
T21.22XD	Burn of second degree of abdominal wall, subsequent encounter	Diagnosis	ICD-10-CM
T21.22XS	Burn of second degree of abdominal wall, sequela	Diagnosis	ICD-10-CM
T21.23	Burn of second degree of upper back	Diagnosis	ICD-10-CM
T21.23XA	Burn of second degree of upper back, initial encounter	Diagnosis	ICD-10-CM
T21.23XD	Burn of second degree of upper back, subsequent encounter	Diagnosis	ICD-10-CM
T21.23XS	Burn of second degree of upper back, sequela	Diagnosis	ICD-10-CM
T21.24	Burn of second degree of lower back	Diagnosis	ICD-10-CM
T21.24XA	Burn of second degree of lower back, initial encounter	Diagnosis	ICD-10-CM
T21.24XD	Burn of second degree of lower back, subsequent encounter	Diagnosis	ICD-10-CM
T21.24XS	Burn of second degree of lower back, sequela	Diagnosis	ICD-10-CM
T21.25	Burn of second degree of buttock	Diagnosis	ICD-10-CM
T21.25XA	Burn of second degree of buttock, initial encounter	Diagnosis	ICD-10-CM
T21.25XD	Burn of second degree of buttock, subsequent encounter	Diagnosis	ICD-10-CM
T21.25XS	Burn of second degree of buttock, sequela	Diagnosis	ICD-10-CM
T21.26	Burn of second degree of male genital region	Diagnosis	ICD-10-CM
T21.26XA	Burn of second degree of male genital region, initial encounter	Diagnosis	ICD-10-CM
T21.26XD	Burn of second degree of male genital region, subsequent encounter	Diagnosis	ICD-10-CM
T21.26XS	Burn of second degree of male genital region, sequela	Diagnosis	ICD-10-CM
T21.27	Burn of second degree of female genital region	Diagnosis	ICD-10-CM
T21.27XA	Burn of second degree of female genital region, initial encounter	Diagnosis	ICD-10-CM
T21.27XD	Burn of second degree of female genital region, subsequent encounter	Diagnosis	ICD-10-CM
T21.27XS	Burn of second degree of female genital region, sequela	Diagnosis	ICD-10-CM
T21.29	Burn of second degree of other site of trunk	Diagnosis	ICD-10-CM
T21.29XA	Burn of second degree of other site of trunk, initial encounter	Diagnosis	ICD-10-CM
T21.29XD	Burn of second degree of other site of trunk, subsequent encounter	Diagnosis	ICD-10-CM
T21.29XS	Burn of second degree of other site of trunk, sequela	Diagnosis	ICD-10-CM
T21.3	Burn of third degree of trunk	Diagnosis	ICD-10-CM
T21.30	Burn of third degree of trunk, unspecified site	Diagnosis	ICD-10-CM
T21.30XA	Burn of third degree of trunk, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T21.30XD	Burn of third degree of trunk, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T21.30XS	Burn of third degree of trunk, unspecified site, sequela	Diagnosis	ICD-10-CM
T21.31	Burn of third degree of chest wall	Diagnosis	ICD-10-CM
T21.31XA	Burn of third degree of chest wall, initial encounter	Diagnosis	ICD-10-CM
T21.31XD	Burn of third degree of chest wall, subsequent encounter	Diagnosis	ICD-10-CM
T21.31XS	Burn of third degree of chest wall, sequela	Diagnosis	ICD-10-CM
T21.32	Burn of third degree of abdominal wall	Diagnosis	ICD-10-CM
T21.32XA	Burn of third degree of abdominal wall, initial encounter	Diagnosis	ICD-10-CM
T21.32XD	Burn of third degree of abdominal wall, subsequent encounter	Diagnosis	ICD-10-CM
T21.32XS	Burn of third degree of abdominal wall, sequela	Diagnosis	ICD-10-CM
T21.33	Burn of third degree of upper back	Diagnosis	ICD-10-CM
T21.33XA	Burn of third degree of upper back, initial encounter	Diagnosis	ICD-10-CM
T21.33XD	Burn of third degree of upper back, subsequent encounter	Diagnosis	ICD-10-CM
T21.33XS	Burn of third degree of upper back, sequela	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T21.34	Burn of third degree of lower back	Diagnosis	ICD-10-CM
T21.34XA	Burn of third degree of lower back, initial encounter	Diagnosis	ICD-10-CM
T21.34XD	Burn of third degree of lower back, subsequent encounter	Diagnosis	ICD-10-CM
T21.34XS	Burn of third degree of lower back, sequela	Diagnosis	ICD-10-CM
T21.35	Burn of third degree of buttock	Diagnosis	ICD-10-CM
T21.35XA	Burn of third degree of buttock, initial encounter	Diagnosis	ICD-10-CM
T21.35XD	Burn of third degree of buttock, subsequent encounter	Diagnosis	ICD-10-CM
T21.35XS	Burn of third degree of buttock, sequela	Diagnosis	ICD-10-CM
T21.36	Burn of third degree of male genital region	Diagnosis	ICD-10-CM
T21.36XA	Burn of third degree of male genital region, initial encounter	Diagnosis	ICD-10-CM
T21.36XD	Burn of third degree of male genital region, subsequent encounter	Diagnosis	ICD-10-CM
T21.36XS	Burn of third degree of male genital region, sequela	Diagnosis	ICD-10-CM
T21.37	Burn of third degree of female genital region	Diagnosis	ICD-10-CM
T21.37XA	Burn of third degree of female genital region, initial encounter	Diagnosis	ICD-10-CM
T21.37XD	Burn of third degree of female genital region, subsequent encounter	Diagnosis	ICD-10-CM
T21.37XS	Burn of third degree of female genital region, sequela	Diagnosis	ICD-10-CM
T21.39	Burn of third degree of other site of trunk	Diagnosis	ICD-10-CM
T21.39XA	Burn of third degree of other site of trunk, initial encounter	Diagnosis	ICD-10-CM
T21.39XD	Burn of third degree of other site of trunk, subsequent encounter	Diagnosis	ICD-10-CM
T21.39XS	Burn of third degree of other site of trunk, sequela	Diagnosis	ICD-10-CM
T22	Burn and corrosion of shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM
T22.0	Burn of unspecified degree of shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM
T22.00	Burn of unspecified degree of shoulder and upper limb, except wrist and hand, unspecified site	Diagnosis	ICD-10-CM
T22.00XA	Burn of unspecified degree of shoulder and upper limb, except wrist and hand, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T22.00XD	Burn of unspecified degree of shoulder and upper limb, except wrist and hand, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T22.00XS	Burn of unspecified degree of shoulder and upper limb, except wrist and hand, unspecified site, sequela	Diagnosis	ICD-10-CM
T22.01	Burn of unspecified degree of forearm	Diagnosis	ICD-10-CM
T22.011	Burn of unspecified degree of right forearm	Diagnosis	ICD-10-CM
T22.011A	Burn of unspecified degree of right forearm, initial encounter	Diagnosis	ICD-10-CM
T22.011D	Burn of unspecified degree of right forearm, subsequent encounter	Diagnosis	ICD-10-CM
T22.011S	Burn of unspecified degree of right forearm, sequela	Diagnosis	ICD-10-CM
T22.012	Burn of unspecified degree of left forearm	Diagnosis	ICD-10-CM
T22.012A	Burn of unspecified degree of left forearm, initial encounter	Diagnosis	ICD-10-CM
T22.012D	Burn of unspecified degree of left forearm, subsequent encounter	Diagnosis	ICD-10-CM
T22.012S	Burn of unspecified degree of left forearm, sequela	Diagnosis	ICD-10-CM
T22.019	Burn of unspecified degree of unspecified forearm	Diagnosis	ICD-10-CM
T22.019A	Burn of unspecified degree of unspecified forearm, initial encounter	Diagnosis	ICD-10-CM
T22.019D	Burn of unspecified degree of unspecified forearm, subsequent encounter	Diagnosis	ICD-10-CM
T22.019S	Burn of unspecified degree of unspecified forearm, sequela	Diagnosis	ICD-10-CM
T22.02	Burn of unspecified degree of elbow	Diagnosis	ICD-10-CM
T22.021	Burn of unspecified degree of right elbow	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T22.021A	Burn of unspecified degree of right elbow, initial encounter	Diagnosis	ICD-10-CM
T22.021D	Burn of unspecified degree of right elbow, subsequent encounter	Diagnosis	ICD-10-CM
T22.021S	Burn of unspecified degree of right elbow, sequela	Diagnosis	ICD-10-CM
T22.022	Burn of unspecified degree of left elbow	Diagnosis	ICD-10-CM
T22.022A	Burn of unspecified degree of left elbow, initial encounter	Diagnosis	ICD-10-CM
T22.022D	Burn of unspecified degree of left elbow, subsequent encounter	Diagnosis	ICD-10-CM
T22.022S	Burn of unspecified degree of left elbow, sequela	Diagnosis	ICD-10-CM
T22.029	Burn of unspecified degree of unspecified elbow	Diagnosis	ICD-10-CM
T22.029A	Burn of unspecified degree of unspecified elbow, initial encounter	Diagnosis	ICD-10-CM
T22.029D	Burn of unspecified degree of unspecified elbow, subsequent encounter	Diagnosis	ICD-10-CM
T22.029S	Burn of unspecified degree of unspecified elbow, sequela	Diagnosis	ICD-10-CM
T22.03	Burn of unspecified degree of upper arm	Diagnosis	ICD-10-CM
T22.031	Burn of unspecified degree of right upper arm	Diagnosis	ICD-10-CM
T22.031A	Burn of unspecified degree of right upper arm, initial encounter	Diagnosis	ICD-10-CM
T22.031D	Burn of unspecified degree of right upper arm, subsequent encounter	Diagnosis	ICD-10-CM
T22.031S	Burn of unspecified degree of right upper arm, sequela	Diagnosis	ICD-10-CM
T22.032	Burn of unspecified degree of left upper arm	Diagnosis	ICD-10-CM
T22.032A	Burn of unspecified degree of left upper arm, initial encounter	Diagnosis	ICD-10-CM
T22.032D	Burn of unspecified degree of left upper arm, subsequent encounter	Diagnosis	ICD-10-CM
T22.032S	Burn of unspecified degree of left upper arm, sequela	Diagnosis	ICD-10-CM
T22.039	Burn of unspecified degree of unspecified upper arm	Diagnosis	ICD-10-CM
T22.039A	Burn of unspecified degree of unspecified upper arm, initial encounter	Diagnosis	ICD-10-CM
T22.039D	Burn of unspecified degree of unspecified upper arm, subsequent encounter	Diagnosis	ICD-10-CM
T22.039S	Burn of unspecified degree of unspecified upper arm, sequela	Diagnosis	ICD-10-CM
T22.04	Burn of unspecified degree of axilla	Diagnosis	ICD-10-CM
T22.041	Burn of unspecified degree of right axilla	Diagnosis	ICD-10-CM
T22.041A	Burn of unspecified degree of right axilla, initial encounter	Diagnosis	ICD-10-CM
T22.041D	Burn of unspecified degree of right axilla, subsequent encounter	Diagnosis	ICD-10-CM
T22.041S	Burn of unspecified degree of right axilla, sequela	Diagnosis	ICD-10-CM
T22.042	Burn of unspecified degree of left axilla	Diagnosis	ICD-10-CM
T22.042A	Burn of unspecified degree of left axilla, initial encounter	Diagnosis	ICD-10-CM
T22.042D	Burn of unspecified degree of left axilla, subsequent encounter	Diagnosis	ICD-10-CM
T22.042S	Burn of unspecified degree of left axilla, sequela	Diagnosis	ICD-10-CM
T22.049	Burn of unspecified degree of unspecified axilla	Diagnosis	ICD-10-CM
T22.049A	Burn of unspecified degree of unspecified axilla, initial encounter	Diagnosis	ICD-10-CM
T22.049D	Burn of unspecified degree of unspecified axilla, subsequent encounter	Diagnosis	ICD-10-CM
T22.049S	Burn of unspecified degree of unspecified axilla, sequela	Diagnosis	ICD-10-CM
T22.05	Burn of unspecified degree of shoulder	Diagnosis	ICD-10-CM
T22.051	Burn of unspecified degree of right shoulder	Diagnosis	ICD-10-CM
T22.051A	Burn of unspecified degree of right shoulder, initial encounter	Diagnosis	ICD-10-CM
T22.051D	Burn of unspecified degree of right shoulder, subsequent encounter	Diagnosis	ICD-10-CM
T22.051S	Burn of unspecified degree of right shoulder, sequela	Diagnosis	ICD-10-CM
T22.052	Burn of unspecified degree of left shoulder	Diagnosis	ICD-10-CM
T22.052A	Burn of unspecified degree of left shoulder, initial encounter	Diagnosis	ICD-10-CM
T22.052D	Burn of unspecified degree of left shoulder, subsequent encounter	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
T22.052S	Burn of unspecified degree of left shoulder, sequela	Diagnosis	ICD-10-CM
T22.059	Burn of unspecified degree of unspecified shoulder	Diagnosis	ICD-10-CM
T22.059A	Burn of unspecified degree of unspecified shoulder, initial encounter	Diagnosis	ICD-10-CM
T22.059D	Burn of unspecified degree of unspecified shoulder, subsequent encounter	Diagnosis	ICD-10-CM
T22.059S	Burn of unspecified degree of unspecified shoulder, sequela	Diagnosis	ICD-10-CM
T22.06	Burn of unspecified degree of scapular region	Diagnosis	ICD-10-CM
T22.061	Burn of unspecified degree of right scapular region	Diagnosis	ICD-10-CM
T22.061A	Burn of unspecified degree of right scapular region, initial encounter	Diagnosis	ICD-10-CM
T22.061D	Burn of unspecified degree of right scapular region, subsequent encounter	Diagnosis	ICD-10-CM
T22.061S	Burn of unspecified degree of right scapular region, sequela	Diagnosis	ICD-10-CM
T22.062	Burn of unspecified degree of left scapular region	Diagnosis	ICD-10-CM
T22.062A	Burn of unspecified degree of left scapular region, initial encounter	Diagnosis	ICD-10-CM
T22.062D	Burn of unspecified degree of left scapular region, subsequent encounter	Diagnosis	ICD-10-CM
T22.062S	Burn of unspecified degree of left scapular region, sequela	Diagnosis	ICD-10-CM
T22.069	Burn of unspecified degree of unspecified scapular region	Diagnosis	ICD-10-CM
T22.069A	Burn of unspecified degree of unspecified scapular region, initial encounter	Diagnosis	ICD-10-CM
T22.069D	Burn of unspecified degree of unspecified scapular region, subsequent encounter	Diagnosis	ICD-10-CM
T22.069S	Burn of unspecified degree of unspecified scapular region, sequela	Diagnosis	ICD-10-CM
T22.09	Burn of unspecified degree of multiple sites of shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM
T22.091	Burn of unspecified degree of multiple sites of right shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM
T22.091A	Burn of unspecified degree of multiple sites of right shoulder and upper limb, except wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T22.091D	Burn of unspecified degree of multiple sites of right shoulder and upper limb, except wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T22.091S	Burn of unspecified degree of multiple sites of right shoulder and upper limb, except wrist and hand, sequela	Diagnosis	ICD-10-CM
T22.092	Burn of unspecified degree of multiple sites of left shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM
T22.092A	Burn of unspecified degree of multiple sites of left shoulder and upper limb, except wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T22.092D	Burn of unspecified degree of multiple sites of left shoulder and upper limb, except wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T22.092S	Burn of unspecified degree of multiple sites of left shoulder and upper limb, except wrist and hand, sequela	Diagnosis	ICD-10-CM
T22.099	Burn of unspecified degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM
T22.099A	Burn of unspecified degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T22.099D	Burn of unspecified degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T22.099S	Burn of unspecified degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, sequela	Diagnosis	ICD-10-CM
T22.1	Burn of first degree of shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T22.10	Burn of first degree of shoulder and upper limb, except wrist and hand, unspecified site	Diagnosis	ICD-10-CM
T22.10XA	Burn of first degree of shoulder and upper limb, except wrist and hand, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T22.10XD	Burn of first degree of shoulder and upper limb, except wrist and hand, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T22.10XS	Burn of first degree of shoulder and upper limb, except wrist and hand, unspecified site, sequela	Diagnosis	ICD-10-CM
T22.11	Burn of first degree of forearm	Diagnosis	ICD-10-CM
T22.111	Burn of first degree of right forearm	Diagnosis	ICD-10-CM
T22.111A	Burn of first degree of right forearm, initial encounter	Diagnosis	ICD-10-CM
T22.111D	Burn of first degree of right forearm, subsequent encounter	Diagnosis	ICD-10-CM
T22.111S	Burn of first degree of right forearm, sequela	Diagnosis	ICD-10-CM
T22.112	Burn of first degree of left forearm	Diagnosis	ICD-10-CM
T22.112A	Burn of first degree of left forearm, initial encounter	Diagnosis	ICD-10-CM
T22.112D	Burn of first degree of left forearm, subsequent encounter	Diagnosis	ICD-10-CM
T22.112S	Burn of first degree of left forearm, sequela	Diagnosis	ICD-10-CM
T22.119	Burn of first degree of unspecified forearm	Diagnosis	ICD-10-CM
T22.119A	Burn of first degree of unspecified forearm, initial encounter	Diagnosis	ICD-10-CM
T22.119D	Burn of first degree of unspecified forearm, subsequent encounter	Diagnosis	ICD-10-CM
T22.119S	Burn of first degree of unspecified forearm, sequela	Diagnosis	ICD-10-CM
T22.12	Burn of first degree of elbow	Diagnosis	ICD-10-CM
T22.121	Burn of first degree of right elbow	Diagnosis	ICD-10-CM
T22.121A	Burn of first degree of right elbow, initial encounter	Diagnosis	ICD-10-CM
T22.121D	Burn of first degree of right elbow, subsequent encounter	Diagnosis	ICD-10-CM
T22.121S	Burn of first degree of right elbow, sequela	Diagnosis	ICD-10-CM
T22.122	Burn of first degree of left elbow	Diagnosis	ICD-10-CM
T22.122A	Burn of first degree of left elbow, initial encounter	Diagnosis	ICD-10-CM
T22.122D	Burn of first degree of left elbow, subsequent encounter	Diagnosis	ICD-10-CM
T22.122S	Burn of first degree of left elbow, sequela	Diagnosis	ICD-10-CM
T22.129	Burn of first degree of unspecified elbow	Diagnosis	ICD-10-CM
T22.129A	Burn of first degree of unspecified elbow, initial encounter	Diagnosis	ICD-10-CM
T22.129D	Burn of first degree of unspecified elbow, subsequent encounter	Diagnosis	ICD-10-CM
T22.129S	Burn of first degree of unspecified elbow, sequela	Diagnosis	ICD-10-CM
T22.13	Burn of first degree of upper arm	Diagnosis	ICD-10-CM
T22.131	Burn of first degree of right upper arm	Diagnosis	ICD-10-CM
T22.131A	Burn of first degree of right upper arm, initial encounter	Diagnosis	ICD-10-CM
T22.131D	Burn of first degree of right upper arm, subsequent encounter	Diagnosis	ICD-10-CM
T22.131S	Burn of first degree of right upper arm, sequela	Diagnosis	ICD-10-CM
T22.132	Burn of first degree of left upper arm	Diagnosis	ICD-10-CM
T22.132A	Burn of first degree of left upper arm, initial encounter	Diagnosis	ICD-10-CM
T22.132D	Burn of first degree of left upper arm, subsequent encounter	Diagnosis	ICD-10-CM
T22.132S	Burn of first degree of left upper arm, sequela	Diagnosis	ICD-10-CM
T22.139	Burn of first degree of unspecified upper arm	Diagnosis	ICD-10-CM
T22.139A	Burn of first degree of unspecified upper arm, initial encounter	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T22.139D	Burn of first degree of unspecified upper arm, subsequent encounter	Diagnosis	ICD-10-CM
T22.139S	Burn of first degree of unspecified upper arm, sequela	Diagnosis	ICD-10-CM
T22.14	Burn of first degree of axilla	Diagnosis	ICD-10-CM
T22.141	Burn of first degree of right axilla	Diagnosis	ICD-10-CM
T22.141A	Burn of first degree of right axilla, initial encounter	Diagnosis	ICD-10-CM
T22.141D	Burn of first degree of right axilla, subsequent encounter	Diagnosis	ICD-10-CM
T22.141S	Burn of first degree of right axilla, sequela	Diagnosis	ICD-10-CM
T22.142	Burn of first degree of left axilla	Diagnosis	ICD-10-CM
T22.142A	Burn of first degree of left axilla, initial encounter	Diagnosis	ICD-10-CM
T22.142D	Burn of first degree of left axilla, subsequent encounter	Diagnosis	ICD-10-CM
T22.142S	Burn of first degree of left axilla, sequela	Diagnosis	ICD-10-CM
T22.149	Burn of first degree of unspecified axilla	Diagnosis	ICD-10-CM
T22.149A	Burn of first degree of unspecified axilla, initial encounter	Diagnosis	ICD-10-CM
T22.149D	Burn of first degree of unspecified axilla, subsequent encounter	Diagnosis	ICD-10-CM
T22.149S	Burn of first degree of unspecified axilla, sequela	Diagnosis	ICD-10-CM
T22.15	Burn of first degree of shoulder	Diagnosis	ICD-10-CM
T22.151	Burn of first degree of right shoulder	Diagnosis	ICD-10-CM
T22.151A	Burn of first degree of right shoulder, initial encounter	Diagnosis	ICD-10-CM
T22.151D	Burn of first degree of right shoulder, subsequent encounter	Diagnosis	ICD-10-CM
T22.151S	Burn of first degree of right shoulder, sequela	Diagnosis	ICD-10-CM
T22.152	Burn of first degree of left shoulder	Diagnosis	ICD-10-CM
T22.152A	Burn of first degree of left shoulder, initial encounter	Diagnosis	ICD-10-CM
T22.152D	Burn of first degree of left shoulder, subsequent encounter	Diagnosis	ICD-10-CM
T22.152S	Burn of first degree of left shoulder, sequela	Diagnosis	ICD-10-CM
T22.159	Burn of first degree of unspecified shoulder	Diagnosis	ICD-10-CM
T22.159A	Burn of first degree of unspecified shoulder, initial encounter	Diagnosis	ICD-10-CM
T22.159D	Burn of first degree of unspecified shoulder, subsequent encounter	Diagnosis	ICD-10-CM
T22.159S	Burn of first degree of unspecified shoulder, sequela	Diagnosis	ICD-10-CM
T22.16	Burn of first degree of scapular region	Diagnosis	ICD-10-CM
T22.161	Burn of first degree of right scapular region	Diagnosis	ICD-10-CM
T22.161A	Burn of first degree of right scapular region, initial encounter	Diagnosis	ICD-10-CM
T22.161D	Burn of first degree of right scapular region, subsequent encounter	Diagnosis	ICD-10-CM
T22.161S	Burn of first degree of right scapular region, sequela	Diagnosis	ICD-10-CM
T22.162	Burn of first degree of left scapular region	Diagnosis	ICD-10-CM
T22.162A	Burn of first degree of left scapular region, initial encounter	Diagnosis	ICD-10-CM
T22.162D	Burn of first degree of left scapular region, subsequent encounter	Diagnosis	ICD-10-CM
T22.162S	Burn of first degree of left scapular region, sequela	Diagnosis	ICD-10-CM
T22.169	Burn of first degree of unspecified scapular region	Diagnosis	ICD-10-CM
T22.169A	Burn of first degree of unspecified scapular region, initial encounter	Diagnosis	ICD-10-CM
T22.169D	Burn of first degree of unspecified scapular region, subsequent encounter	Diagnosis	ICD-10-CM
T22.169S	Burn of first degree of unspecified scapular region, sequela	Diagnosis	ICD-10-CM
T22.19	Burn of first degree of multiple sites of shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM
T22.191	Burn of first degree of multiple sites of right shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T22.191A	Burn of first degree of multiple sites of right shoulder and upper limb, except wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T22.191D	Burn of first degree of multiple sites of right shoulder and upper limb, except wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T22.191S	Burn of first degree of multiple sites of right shoulder and upper limb, except wrist and hand, sequela	Diagnosis	ICD-10-CM
T22.192	Burn of first degree of multiple sites of left shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM
T22.192A	Burn of first degree of multiple sites of left shoulder and upper limb, except wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T22.192D	Burn of first degree of multiple sites of left shoulder and upper limb, except wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T22.192S	Burn of first degree of multiple sites of left shoulder and upper limb, except wrist and hand, sequela	Diagnosis	ICD-10-CM
T22.199	Burn of first degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM
T22.199A	Burn of first degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T22.199D	Burn of first degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T22.199S	Burn of first degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, sequela	Diagnosis	ICD-10-CM
T22.2	Burn of second degree of shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM
T22.20	Burn of second degree of shoulder and upper limb, except wrist and hand, unspecified site	Diagnosis	ICD-10-CM
T22.20XA	Burn of second degree of shoulder and upper limb, except wrist and hand, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T22.20XD	Burn of second degree of shoulder and upper limb, except wrist and hand, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T22.20XS	Burn of second degree of shoulder and upper limb, except wrist and hand, unspecified site, sequela	Diagnosis	ICD-10-CM
T22.21	Burn of second degree of forearm	Diagnosis	ICD-10-CM
T22.211	Burn of second degree of right forearm	Diagnosis	ICD-10-CM
T22.211A	Burn of second degree of right forearm, initial encounter	Diagnosis	ICD-10-CM
T22.211D	Burn of second degree of right forearm, subsequent encounter	Diagnosis	ICD-10-CM
T22.211S	Burn of second degree of right forearm, sequela	Diagnosis	ICD-10-CM
T22.212	Burn of second degree of left forearm	Diagnosis	ICD-10-CM
T22.212A	Burn of second degree of left forearm, initial encounter	Diagnosis	ICD-10-CM
T22.212D	Burn of second degree of left forearm, subsequent encounter	Diagnosis	ICD-10-CM
T22.212S	Burn of second degree of left forearm, sequela	Diagnosis	ICD-10-CM
T22.219	Burn of second degree of unspecified forearm	Diagnosis	ICD-10-CM
T22.219A	Burn of second degree of unspecified forearm, initial encounter	Diagnosis	ICD-10-CM
T22.219D	Burn of second degree of unspecified forearm, subsequent encounter	Diagnosis	ICD-10-CM
T22.219S	Burn of second degree of unspecified forearm, sequela	Diagnosis	ICD-10-CM
T22.22	Burn of second degree of elbow	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
T22.221	Burn of second degree of right elbow	Diagnosis	ICD-10-CM
T22.221A	Burn of second degree of right elbow, initial encounter	Diagnosis	ICD-10-CM
T22.221D	Burn of second degree of right elbow, subsequent encounter	Diagnosis	ICD-10-CM
T22.221S	Burn of second degree of right elbow, sequela	Diagnosis	ICD-10-CM
T22.222	Burn of second degree of left elbow	Diagnosis	ICD-10-CM
T22.222A	Burn of second degree of left elbow, initial encounter	Diagnosis	ICD-10-CM
T22.222D	Burn of second degree of left elbow, subsequent encounter	Diagnosis	ICD-10-CM
T22.222S	Burn of second degree of left elbow, sequela	Diagnosis	ICD-10-CM
T22.229	Burn of second degree of unspecified elbow	Diagnosis	ICD-10-CM
T22.229A	Burn of second degree of unspecified elbow, initial encounter	Diagnosis	ICD-10-CM
T22.229D	Burn of second degree of unspecified elbow, subsequent encounter	Diagnosis	ICD-10-CM
T22.229S	Burn of second degree of unspecified elbow, sequela	Diagnosis	ICD-10-CM
T22.23	Burn of second degree of upper arm	Diagnosis	ICD-10-CM
T22.231	Burn of second degree of right upper arm	Diagnosis	ICD-10-CM
T22.231A	Burn of second degree of right upper arm, initial encounter	Diagnosis	ICD-10-CM
T22.231D	Burn of second degree of right upper arm, subsequent encounter	Diagnosis	ICD-10-CM
T22.231S	Burn of second degree of right upper arm, sequela	Diagnosis	ICD-10-CM
T22.232	Burn of second degree of left upper arm	Diagnosis	ICD-10-CM
T22.232A	Burn of second degree of left upper arm, initial encounter	Diagnosis	ICD-10-CM
T22.232D	Burn of second degree of left upper arm, subsequent encounter	Diagnosis	ICD-10-CM
T22.232S	Burn of second degree of left upper arm, sequela	Diagnosis	ICD-10-CM
T22.239	Burn of second degree of unspecified upper arm	Diagnosis	ICD-10-CM
T22.239A	Burn of second degree of unspecified upper arm, initial encounter	Diagnosis	ICD-10-CM
T22.239D	Burn of second degree of unspecified upper arm, subsequent encounter	Diagnosis	ICD-10-CM
T22.239S	Burn of second degree of unspecified upper arm, sequela	Diagnosis	ICD-10-CM
T22.24	Burn of second degree of axilla	Diagnosis	ICD-10-CM
T22.241	Burn of second degree of right axilla	Diagnosis	ICD-10-CM
T22.241A	Burn of second degree of right axilla, initial encounter	Diagnosis	ICD-10-CM
T22.241D	Burn of second degree of right axilla, subsequent encounter	Diagnosis	ICD-10-CM
T22.241S	Burn of second degree of right axilla, sequela	Diagnosis	ICD-10-CM
T22.242	Burn of second degree of left axilla	Diagnosis	ICD-10-CM
T22.242A	Burn of second degree of left axilla, initial encounter	Diagnosis	ICD-10-CM
T22.242D	Burn of second degree of left axilla, subsequent encounter	Diagnosis	ICD-10-CM
T22.242S	Burn of second degree of left axilla, sequela	Diagnosis	ICD-10-CM
T22.249	Burn of second degree of unspecified axilla	Diagnosis	ICD-10-CM
T22.249A	Burn of second degree of unspecified axilla, initial encounter	Diagnosis	ICD-10-CM
T22.249D	Burn of second degree of unspecified axilla, subsequent encounter	Diagnosis	ICD-10-CM
T22.249S	Burn of second degree of unspecified axilla, sequela	Diagnosis	ICD-10-CM
T22.25	Burn of second degree of shoulder	Diagnosis	ICD-10-CM
T22.251	Burn of second degree of right shoulder	Diagnosis	ICD-10-CM
T22.251A	Burn of second degree of right shoulder, initial encounter	Diagnosis	ICD-10-CM
T22.251D	Burn of second degree of right shoulder, subsequent encounter	Diagnosis	ICD-10-CM
T22.251S	Burn of second degree of right shoulder, sequela	Diagnosis	ICD-10-CM
T22.252	Burn of second degree of left shoulder	Diagnosis	ICD-10-CM
T22.252A	Burn of second degree of left shoulder, initial encounter	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
T22.252D	Burn of second degree of left shoulder, subsequent encounter	Diagnosis	ICD-10-CM
T22.252S	Burn of second degree of left shoulder, sequela	Diagnosis	ICD-10-CM
T22.259	Burn of second degree of unspecified shoulder	Diagnosis	ICD-10-CM
T22.259A	Burn of second degree of unspecified shoulder, initial encounter	Diagnosis	ICD-10-CM
T22.259D	Burn of second degree of unspecified shoulder, subsequent encounter	Diagnosis	ICD-10-CM
T22.259S	Burn of second degree of unspecified shoulder, sequela	Diagnosis	ICD-10-CM
T22.26	Burn of second degree of scapular region	Diagnosis	ICD-10-CM
T22.261	Burn of second degree of right scapular region	Diagnosis	ICD-10-CM
T22.261A	Burn of second degree of right scapular region, initial encounter	Diagnosis	ICD-10-CM
T22.261D	Burn of second degree of right scapular region, subsequent encounter	Diagnosis	ICD-10-CM
T22.261S	Burn of second degree of right scapular region, sequela	Diagnosis	ICD-10-CM
T22.262	Burn of second degree of left scapular region	Diagnosis	ICD-10-CM
T22.262A	Burn of second degree of left scapular region, initial encounter	Diagnosis	ICD-10-CM
T22.262D	Burn of second degree of left scapular region, subsequent encounter	Diagnosis	ICD-10-CM
T22.262S	Burn of second degree of left scapular region, sequela	Diagnosis	ICD-10-CM
T22.269	Burn of second degree of unspecified scapular region	Diagnosis	ICD-10-CM
T22.269A	Burn of second degree of unspecified scapular region, initial encounter	Diagnosis	ICD-10-CM
T22.269D	Burn of second degree of unspecified scapular region, subsequent encounter	Diagnosis	ICD-10-CM
T22.269S	Burn of second degree of unspecified scapular region, sequela	Diagnosis	ICD-10-CM
T22.29	Burn of second degree of multiple sites of shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM
T22.291	Burn of second degree of multiple sites of right shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM
T22.291A	Burn of second degree of multiple sites of right shoulder and upper limb, except wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T22.291D	Burn of second degree of multiple sites of right shoulder and upper limb, except wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T22.291S	Burn of second degree of multiple sites of right shoulder and upper limb, except wrist and hand, sequela	Diagnosis	ICD-10-CM
T22.292	Burn of second degree of multiple sites of left shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM
T22.292A	Burn of second degree of multiple sites of left shoulder and upper limb, except wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T22.292D	Burn of second degree of multiple sites of left shoulder and upper limb, except wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T22.292S	Burn of second degree of multiple sites of left shoulder and upper limb, except wrist and hand, sequela	Diagnosis	ICD-10-CM
T22.299	Burn of second degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM
T22.299A	Burn of second degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T22.299D	Burn of second degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T22.299S	Burn of second degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, sequela	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T22.3	Burn of third degree of shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM
T22.30	Burn of third degree of shoulder and upper limb, except wrist and hand, unspecified site	Diagnosis	ICD-10-CM
T22.30XA	Burn of third degree of shoulder and upper limb, except wrist and hand, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T22.30XD	Burn of third degree of shoulder and upper limb, except wrist and hand, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T22.30XS	Burn of third degree of shoulder and upper limb, except wrist and hand, unspecified site, sequela	Diagnosis	ICD-10-CM
T22.31	Burn of third degree of forearm	Diagnosis	ICD-10-CM
T22.311	Burn of third degree of right forearm	Diagnosis	ICD-10-CM
T22.311A	Burn of third degree of right forearm, initial encounter	Diagnosis	ICD-10-CM
T22.311D	Burn of third degree of right forearm, subsequent encounter	Diagnosis	ICD-10-CM
T22.311S	Burn of third degree of right forearm, sequela	Diagnosis	ICD-10-CM
T22.312	Burn of third degree of left forearm	Diagnosis	ICD-10-CM
T22.312A	Burn of third degree of left forearm, initial encounter	Diagnosis	ICD-10-CM
T22.312D	Burn of third degree of left forearm, subsequent encounter	Diagnosis	ICD-10-CM
T22.312S	Burn of third degree of left forearm, sequela	Diagnosis	ICD-10-CM
T22.319	Burn of third degree of unspecified forearm	Diagnosis	ICD-10-CM
T22.319A	Burn of third degree of unspecified forearm, initial encounter	Diagnosis	ICD-10-CM
T22.319D	Burn of third degree of unspecified forearm, subsequent encounter	Diagnosis	ICD-10-CM
T22.319S	Burn of third degree of unspecified forearm, sequela	Diagnosis	ICD-10-CM
T22.32	Burn of third degree of elbow	Diagnosis	ICD-10-CM
T22.321	Burn of third degree of right elbow	Diagnosis	ICD-10-CM
T22.321A	Burn of third degree of right elbow, initial encounter	Diagnosis	ICD-10-CM
T22.321D	Burn of third degree of right elbow, subsequent encounter	Diagnosis	ICD-10-CM
T22.321S	Burn of third degree of right elbow, sequela	Diagnosis	ICD-10-CM
T22.322	Burn of third degree of left elbow	Diagnosis	ICD-10-CM
T22.322A	Burn of third degree of left elbow, initial encounter	Diagnosis	ICD-10-CM
T22.322D	Burn of third degree of left elbow, subsequent encounter	Diagnosis	ICD-10-CM
T22.322S	Burn of third degree of left elbow, sequela	Diagnosis	ICD-10-CM
T22.329	Burn of third degree of unspecified elbow	Diagnosis	ICD-10-CM
T22.329A	Burn of third degree of unspecified elbow, initial encounter	Diagnosis	ICD-10-CM
T22.329D	Burn of third degree of unspecified elbow, subsequent encounter	Diagnosis	ICD-10-CM
T22.329S	Burn of third degree of unspecified elbow, sequela	Diagnosis	ICD-10-CM
T22.33	Burn of third degree of upper arm	Diagnosis	ICD-10-CM
T22.331	Burn of third degree of right upper arm	Diagnosis	ICD-10-CM
T22.331A	Burn of third degree of right upper arm, initial encounter	Diagnosis	ICD-10-CM
T22.331D	Burn of third degree of right upper arm, subsequent encounter	Diagnosis	ICD-10-CM
T22.331S	Burn of third degree of right upper arm, sequela	Diagnosis	ICD-10-CM
T22.332	Burn of third degree of left upper arm	Diagnosis	ICD-10-CM
T22.332A	Burn of third degree of left upper arm, initial encounter	Diagnosis	ICD-10-CM
T22.332D	Burn of third degree of left upper arm, subsequent encounter	Diagnosis	ICD-10-CM
T22.332S	Burn of third degree of left upper arm, sequela	Diagnosis	ICD-10-CM
T22.339	Burn of third degree of unspecified upper arm	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
T22.339A	Burn of third degree of unspecified upper arm, initial encounter	Diagnosis	ICD-10-CM
T22.339D	Burn of third degree of unspecified upper arm, subsequent encounter	Diagnosis	ICD-10-CM
T22.339S	Burn of third degree of unspecified upper arm, sequela	Diagnosis	ICD-10-CM
T22.34	Burn of third degree of axilla	Diagnosis	ICD-10-CM
T22.341	Burn of third degree of right axilla	Diagnosis	ICD-10-CM
T22.341A	Burn of third degree of right axilla, initial encounter	Diagnosis	ICD-10-CM
T22.341D	Burn of third degree of right axilla, subsequent encounter	Diagnosis	ICD-10-CM
T22.341S	Burn of third degree of right axilla, sequela	Diagnosis	ICD-10-CM
T22.342	Burn of third degree of left axilla	Diagnosis	ICD-10-CM
T22.342A	Burn of third degree of left axilla, initial encounter	Diagnosis	ICD-10-CM
T22.342D	Burn of third degree of left axilla, subsequent encounter	Diagnosis	ICD-10-CM
T22.342S	Burn of third degree of left axilla, sequela	Diagnosis	ICD-10-CM
T22.349	Burn of third degree of unspecified axilla	Diagnosis	ICD-10-CM
T22.349A	Burn of third degree of unspecified axilla, initial encounter	Diagnosis	ICD-10-CM
T22.349D	Burn of third degree of unspecified axilla, subsequent encounter	Diagnosis	ICD-10-CM
T22.349S	Burn of third degree of unspecified axilla, sequela	Diagnosis	ICD-10-CM
T22.35	Burn of third degree of shoulder	Diagnosis	ICD-10-CM
T22.351	Burn of third degree of right shoulder	Diagnosis	ICD-10-CM
T22.351A	Burn of third degree of right shoulder, initial encounter	Diagnosis	ICD-10-CM
T22.351D	Burn of third degree of right shoulder, subsequent encounter	Diagnosis	ICD-10-CM
T22.351S	Burn of third degree of right shoulder, sequela	Diagnosis	ICD-10-CM
T22.352	Burn of third degree of left shoulder	Diagnosis	ICD-10-CM
T22.352A	Burn of third degree of left shoulder, initial encounter	Diagnosis	ICD-10-CM
T22.352D	Burn of third degree of left shoulder, subsequent encounter	Diagnosis	ICD-10-CM
T22.352S	Burn of third degree of left shoulder, sequela	Diagnosis	ICD-10-CM
T22.359	Burn of third degree of unspecified shoulder	Diagnosis	ICD-10-CM
T22.359A	Burn of third degree of unspecified shoulder, initial encounter	Diagnosis	ICD-10-CM
T22.359D	Burn of third degree of unspecified shoulder, subsequent encounter	Diagnosis	ICD-10-CM
T22.359S	Burn of third degree of unspecified shoulder, sequela	Diagnosis	ICD-10-CM
T22.36	Burn of third degree of scapular region	Diagnosis	ICD-10-CM
T22.361	Burn of third degree of right scapular region	Diagnosis	ICD-10-CM
T22.361A	Burn of third degree of right scapular region, initial encounter	Diagnosis	ICD-10-CM
T22.361D	Burn of third degree of right scapular region, subsequent encounter	Diagnosis	ICD-10-CM
T22.361S	Burn of third degree of right scapular region, sequela	Diagnosis	ICD-10-CM
T22.362	Burn of third degree of left scapular region	Diagnosis	ICD-10-CM
T22.362A	Burn of third degree of left scapular region, initial encounter	Diagnosis	ICD-10-CM
T22.362D	Burn of third degree of left scapular region, subsequent encounter	Diagnosis	ICD-10-CM
T22.362S	Burn of third degree of left scapular region, sequela	Diagnosis	ICD-10-CM
T22.369	Burn of third degree of unspecified scapular region	Diagnosis	ICD-10-CM
T22.369A	Burn of third degree of unspecified scapular region, initial encounter	Diagnosis	ICD-10-CM
T22.369D	Burn of third degree of unspecified scapular region, subsequent encounter	Diagnosis	ICD-10-CM
T22.369S	Burn of third degree of unspecified scapular region, sequela	Diagnosis	ICD-10-CM
T22.39	Burn of third degree of multiple sites of shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
T22.391	Burn of third degree of multiple sites of right shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM
T22.391A	Burn of third degree of multiple sites of right shoulder and upper limb, except wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T22.391D	Burn of third degree of multiple sites of right shoulder and upper limb, except wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T22.391S	Burn of third degree of multiple sites of right shoulder and upper limb, except wrist and hand, sequela	Diagnosis	ICD-10-CM
T22.392	Burn of third degree of multiple sites of left shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM
T22.392A	Burn of third degree of multiple sites of left shoulder and upper limb, except wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T22.392D	Burn of third degree of multiple sites of left shoulder and upper limb, except wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T22.392S	Burn of third degree of multiple sites of left shoulder and upper limb, except wrist and hand, sequela	Diagnosis	ICD-10-CM
T22.399	Burn of third degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand	Diagnosis	ICD-10-CM
T22.399A	Burn of third degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T22.399D	Burn of third degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T22.399S	Burn of third degree of multiple sites of unspecified shoulder and upper limb, except wrist and hand, sequela	Diagnosis	ICD-10-CM
T23	Burn and corrosion of wrist and hand	Diagnosis	ICD-10-CM
T23.0	Burn of unspecified degree of wrist and hand	Diagnosis	ICD-10-CM
T23.00	Burn of unspecified degree of hand, unspecified site	Diagnosis	ICD-10-CM
T23.001	Burn of unspecified degree of right hand, unspecified site	Diagnosis	ICD-10-CM
T23.001A	Burn of unspecified degree of right hand, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T23.001D	Burn of unspecified degree of right hand, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T23.001S	Burn of unspecified degree of right hand, unspecified site, sequela	Diagnosis	ICD-10-CM
T23.002	Burn of unspecified degree of left hand, unspecified site	Diagnosis	ICD-10-CM
T23.002A	Burn of unspecified degree of left hand, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T23.002D	Burn of unspecified degree of left hand, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T23.002S	Burn of unspecified degree of left hand, unspecified site, sequela	Diagnosis	ICD-10-CM
T23.009	Burn of unspecified degree of unspecified hand, unspecified site	Diagnosis	ICD-10-CM
T23.009A	Burn of unspecified degree of unspecified hand, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T23.009D	Burn of unspecified degree of unspecified hand, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T23.009S	Burn of unspecified degree of unspecified hand, unspecified site, sequela	Diagnosis	ICD-10-CM
T23.01	Burn of unspecified degree of thumb (nail)	Diagnosis	ICD-10-CM
T23.011	Burn of unspecified degree of right thumb (nail)	Diagnosis	ICD-10-CM
T23.011A	Burn of unspecified degree of right thumb (nail), initial encounter	Diagnosis	ICD-10-CM
T23.011D	Burn of unspecified degree of right thumb (nail), subsequent encounter	Diagnosis	ICD-10-CM
T23.011S	Burn of unspecified degree of right thumb (nail), sequela	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
T23.012	Burn of unspecified degree of left thumb (nail)	Diagnosis	ICD-10-CM
T23.012A	Burn of unspecified degree of left thumb (nail), initial encounter	Diagnosis	ICD-10-CM
T23.012D	Burn of unspecified degree of left thumb (nail), subsequent encounter	Diagnosis	ICD-10-CM
T23.012S	Burn of unspecified degree of left thumb (nail), sequela	Diagnosis	ICD-10-CM
T23.019	Burn of unspecified degree of unspecified thumb (nail)	Diagnosis	ICD-10-CM
T23.019A	Burn of unspecified degree of unspecified thumb (nail), initial encounter	Diagnosis	ICD-10-CM
T23.019D	Burn of unspecified degree of unspecified thumb (nail), subsequent encounter	Diagnosis	ICD-10-CM
T23.019S	Burn of unspecified degree of unspecified thumb (nail), sequela	Diagnosis	ICD-10-CM
T23.02	Burn of unspecified degree of single finger (nail) except thumb	Diagnosis	ICD-10-CM
T23.021	Burn of unspecified degree of single right finger (nail) except thumb	Diagnosis	ICD-10-CM
T23.021A	Burn of unspecified degree of single right finger (nail) except thumb, initial encounter	Diagnosis	ICD-10-CM
T23.021D	Burn of unspecified degree of single right finger (nail) except thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.021S	Burn of unspecified degree of single right finger (nail) except thumb, sequela	Diagnosis	ICD-10-CM
T23.022	Burn of unspecified degree of single left finger (nail) except thumb	Diagnosis	ICD-10-CM
T23.022A	Burn of unspecified degree of single left finger (nail) except thumb, initial encounter	Diagnosis	ICD-10-CM
T23.022D	Burn of unspecified degree of single left finger (nail) except thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.022S	Burn of unspecified degree of single left finger (nail) except thumb, sequela	Diagnosis	ICD-10-CM
T23.029	Burn of unspecified degree of unspecified single finger (nail) except thumb	Diagnosis	ICD-10-CM
T23.029A	Burn of unspecified degree of unspecified single finger (nail) except thumb, initial encounter	Diagnosis	ICD-10-CM
T23.029D	Burn of unspecified degree of unspecified single finger (nail) except thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.029S	Burn of unspecified degree of unspecified single finger (nail) except thumb, sequela	Diagnosis	ICD-10-CM
T23.03	Burn of unspecified degree of multiple fingers (nail), not including thumb	Diagnosis	ICD-10-CM
T23.031	Burn of unspecified degree of multiple right fingers (nail), not including thumb	Diagnosis	ICD-10-CM
T23.031A	Burn of unspecified degree of multiple right fingers (nail), not including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.031D	Burn of unspecified degree of multiple right fingers (nail), not including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.031S	Burn of unspecified degree of multiple right fingers (nail), not including thumb, sequela	Diagnosis	ICD-10-CM
T23.032	Burn of unspecified degree of multiple left fingers (nail), not including thumb	Diagnosis	ICD-10-CM
T23.032A	Burn of unspecified degree of multiple left fingers (nail), not including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.032D	Burn of unspecified degree of multiple left fingers (nail), not including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.032S	Burn of unspecified degree of multiple left fingers (nail), not including thumb, sequela	Diagnosis	ICD-10-CM
T23.039	Burn of unspecified degree of unspecified multiple fingers (nail), not including thumb	Diagnosis	ICD-10-CM
T23.039A	Burn of unspecified degree of unspecified multiple fingers (nail), not including thumb, initial encounter	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
T23.039D	Burn of unspecified degree of unspecified multiple fingers (nail), not including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.039S	Burn of unspecified degree of unspecified multiple fingers (nail), not including thumb, sequela	Diagnosis	ICD-10-CM
T23.04	Burn of unspecified degree of multiple fingers (nail), including thumb	Diagnosis	ICD-10-CM
T23.041	Burn of unspecified degree of multiple right fingers (nail), including thumb	Diagnosis	ICD-10-CM
T23.041A	Burn of unspecified degree of multiple right fingers (nail), including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.041D	Burn of unspecified degree of multiple right fingers (nail), including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.041S	Burn of unspecified degree of multiple right fingers (nail), including thumb, sequela	Diagnosis	ICD-10-CM
T23.042	Burn of unspecified degree of multiple left fingers (nail), including thumb	Diagnosis	ICD-10-CM
T23.042A	Burn of unspecified degree of multiple left fingers (nail), including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.042D	Burn of unspecified degree of multiple left fingers (nail), including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.042S	Burn of unspecified degree of multiple left fingers (nail), including thumb, sequela	Diagnosis	ICD-10-CM
T23.049	Burn of unspecified degree of unspecified multiple fingers (nail), including thumb	Diagnosis	ICD-10-CM
T23.049A	Burn of unspecified degree of unspecified multiple fingers (nail), including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.049D	Burn of unspecified degree of unspecified multiple fingers (nail), including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.049S	Burn of unspecified degree of unspecified multiple fingers (nail), including thumb, sequela	Diagnosis	ICD-10-CM
T23.05	Burn of unspecified degree of palm	Diagnosis	ICD-10-CM
T23.051	Burn of unspecified degree of right palm	Diagnosis	ICD-10-CM
T23.051A	Burn of unspecified degree of right palm, initial encounter	Diagnosis	ICD-10-CM
T23.051D	Burn of unspecified degree of right palm, subsequent encounter	Diagnosis	ICD-10-CM
T23.051S	Burn of unspecified degree of right palm, sequela	Diagnosis	ICD-10-CM
T23.052	Burn of unspecified degree of left palm	Diagnosis	ICD-10-CM
T23.052A	Burn of unspecified degree of left palm, initial encounter	Diagnosis	ICD-10-CM
T23.052D	Burn of unspecified degree of left palm, subsequent encounter	Diagnosis	ICD-10-CM
T23.052S	Burn of unspecified degree of left palm, sequela	Diagnosis	ICD-10-CM
T23.059	Burn of unspecified degree of unspecified palm	Diagnosis	ICD-10-CM
T23.059A	Burn of unspecified degree of unspecified palm, initial encounter	Diagnosis	ICD-10-CM
T23.059D	Burn of unspecified degree of unspecified palm, subsequent encounter	Diagnosis	ICD-10-CM
T23.059S	Burn of unspecified degree of unspecified palm, sequela	Diagnosis	ICD-10-CM
T23.06	Burn of unspecified degree of back of hand	Diagnosis	ICD-10-CM
T23.061	Burn of unspecified degree of back of right hand	Diagnosis	ICD-10-CM
T23.061A	Burn of unspecified degree of back of right hand, initial encounter	Diagnosis	ICD-10-CM
T23.061D	Burn of unspecified degree of back of right hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.061S	Burn of unspecified degree of back of right hand, sequela	Diagnosis	ICD-10-CM
T23.062	Burn of unspecified degree of back of left hand	Diagnosis	ICD-10-CM
T23.062A	Burn of unspecified degree of back of left hand, initial encounter	Diagnosis	ICD-10-CM
T23.062D	Burn of unspecified degree of back of left hand, subsequent encounter	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
T23.062S	Burn of unspecified degree of back of left hand, sequela	Diagnosis	ICD-10-CM
T23.069	Burn of unspecified degree of back of unspecified hand	Diagnosis	ICD-10-CM
T23.069A	Burn of unspecified degree of back of unspecified hand, initial encounter	Diagnosis	ICD-10-CM
T23.069D	Burn of unspecified degree of back of unspecified hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.069S	Burn of unspecified degree of back of unspecified hand, sequela	Diagnosis	ICD-10-CM
T23.07	Burn of unspecified degree of wrist	Diagnosis	ICD-10-CM
T23.071	Burn of unspecified degree of right wrist	Diagnosis	ICD-10-CM
T23.071A	Burn of unspecified degree of right wrist, initial encounter	Diagnosis	ICD-10-CM
T23.071D	Burn of unspecified degree of right wrist, subsequent encounter	Diagnosis	ICD-10-CM
T23.071S	Burn of unspecified degree of right wrist, sequela	Diagnosis	ICD-10-CM
T23.072	Burn of unspecified degree of left wrist	Diagnosis	ICD-10-CM
T23.072A	Burn of unspecified degree of left wrist, initial encounter	Diagnosis	ICD-10-CM
T23.072D	Burn of unspecified degree of left wrist, subsequent encounter	Diagnosis	ICD-10-CM
T23.072S	Burn of unspecified degree of left wrist, sequela	Diagnosis	ICD-10-CM
T23.079	Burn of unspecified degree of unspecified wrist	Diagnosis	ICD-10-CM
T23.079A	Burn of unspecified degree of unspecified wrist, initial encounter	Diagnosis	ICD-10-CM
T23.079D	Burn of unspecified degree of unspecified wrist, subsequent encounter	Diagnosis	ICD-10-CM
T23.079S	Burn of unspecified degree of unspecified wrist, sequela	Diagnosis	ICD-10-CM
T23.09	Burn of unspecified degree of multiple sites of wrist and hand	Diagnosis	ICD-10-CM
T23.091	Burn of unspecified degree of multiple sites of right wrist and hand	Diagnosis	ICD-10-CM
T23.091A	Burn of unspecified degree of multiple sites of right wrist and hand, initial	Diagnosis	ICD-10-CM
T23.091D	Burn of unspecified degree of multiple sites of right wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.091S	Burn of unspecified degree of multiple sites of right wrist and hand, sequela	Diagnosis	ICD-10-CM
T23.092	Burn of unspecified degree of multiple sites of left wrist and hand	Diagnosis	ICD-10-CM
T23.092A	Burn of unspecified degree of multiple sites of left wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T23.092D	Burn of unspecified degree of multiple sites of left wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.092S	Burn of unspecified degree of multiple sites of left wrist and hand, sequela	Diagnosis	ICD-10-CM
T23.099	Burn of unspecified degree of multiple sites of unspecified wrist and hand	Diagnosis	ICD-10-CM
T23.099A	Burn of unspecified degree of multiple sites of unspecified wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T23.099D	Burn of unspecified degree of multiple sites of unspecified wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.099S	Burn of unspecified degree of multiple sites of unspecified wrist and hand, sequela	Diagnosis	ICD-10-CM
T23.1	Burn of first degree of wrist and hand	Diagnosis	ICD-10-CM
T23.10	Burn of first degree of hand, unspecified site	Diagnosis	ICD-10-CM
T23.101	Burn of first degree of right hand, unspecified site	Diagnosis	ICD-10-CM
T23.101A	Burn of first degree of right hand, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T23.101D	Burn of first degree of right hand, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T23.101S	Burn of first degree of right hand, unspecified site, sequela	Diagnosis	ICD-10-CM
T23.102	Burn of first degree of left hand, unspecified site	Diagnosis	ICD-10-CM
T23.102A	Burn of first degree of left hand, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T23.102D	Burn of first degree of left hand, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T23.102S	Burn of first degree of left hand, unspecified site, sequela	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
T23.109	Burn of first degree of unspecified hand, unspecified site	Diagnosis	ICD-10-CM
T23.109A	Burn of first degree of unspecified hand, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T23.109D	Burn of first degree of unspecified hand, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T23.109S	Burn of first degree of unspecified hand, unspecified site, sequela	Diagnosis	ICD-10-CM
T23.11	Burn of first degree of thumb (nail)	Diagnosis	ICD-10-CM
T23.111	Burn of first degree of right thumb (nail)	Diagnosis	ICD-10-CM
T23.111A	Burn of first degree of right thumb (nail), initial encounter	Diagnosis	ICD-10-CM
T23.111D	Burn of first degree of right thumb (nail), subsequent encounter	Diagnosis	ICD-10-CM
T23.111S	Burn of first degree of right thumb (nail), sequela	Diagnosis	ICD-10-CM
T23.112	Burn of first degree of left thumb (nail)	Diagnosis	ICD-10-CM
T23.112A	Burn of first degree of left thumb (nail), initial encounter	Diagnosis	ICD-10-CM
T23.112D	Burn of first degree of left thumb (nail), subsequent encounter	Diagnosis	ICD-10-CM
T23.112S	Burn of first degree of left thumb (nail), sequela	Diagnosis	ICD-10-CM
T23.119	Burn of first degree of unspecified thumb (nail)	Diagnosis	ICD-10-CM
T23.119A	Burn of first degree of unspecified thumb (nail), initial encounter	Diagnosis	ICD-10-CM
T23.119D	Burn of first degree of unspecified thumb (nail), subsequent encounter	Diagnosis	ICD-10-CM
T23.119S	Burn of first degree of unspecified thumb (nail), sequela	Diagnosis	ICD-10-CM
T23.12	Burn of first degree of single finger (nail) except thumb	Diagnosis	ICD-10-CM
T23.121	Burn of first degree of single right finger (nail) except thumb	Diagnosis	ICD-10-CM
T23.121A	Burn of first degree of single right finger (nail) except thumb, initial encounter	Diagnosis	ICD-10-CM
T23.121D	Burn of first degree of single right finger (nail) except thumb, subsequent	Diagnosis	ICD-10-CM
T23.121S	Burn of first degree of single right finger (nail) except thumb, sequela	Diagnosis	ICD-10-CM
T23.122	Burn of first degree of single left finger (nail) except thumb	Diagnosis	ICD-10-CM
T23.122A	Burn of first degree of single left finger (nail) except thumb, initial encounter	Diagnosis	ICD-10-CM
T23.122D	Burn of first degree of single left finger (nail) except thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.122S	Burn of first degree of single left finger (nail) except thumb, sequela	Diagnosis	ICD-10-CM
T23.129	Burn of first degree of unspecified single finger (nail) except thumb	Diagnosis	ICD-10-CM
T23.129A	Burn of first degree of unspecified single finger (nail) except thumb, initial	Diagnosis	ICD-10-CM
T23.129D	Burn of first degree of unspecified single finger (nail) except thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.129S	Burn of first degree of unspecified single finger (nail) except thumb, sequela	Diagnosis	ICD-10-CM
T23.13	Burn of first degree of multiple fingers (nail), not including thumb	Diagnosis	ICD-10-CM
T23.131	Burn of first degree of multiple right fingers (nail), not including thumb	Diagnosis	ICD-10-CM
T23.131A	Burn of first degree of multiple right fingers (nail), not including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.131D	Burn of first degree of multiple right fingers (nail), not including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.131S	Burn of first degree of multiple right fingers (nail), not including thumb, sequela	Diagnosis	ICD-10-CM
T23.132	Burn of first degree of multiple left fingers (nail), not including thumb	Diagnosis	ICD-10-CM
T23.132A	Burn of first degree of multiple left fingers (nail), not including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.132D	Burn of first degree of multiple left fingers (nail), not including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.132S	Burn of first degree of multiple left fingers (nail), not including thumb, sequela	Diagnosis	ICD-10-CM
T23.139	Burn of first degree of unspecified multiple fingers (nail), not including thumb	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T23.139A	Burn of first degree of unspecified multiple fingers (nail), not including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.139D	Burn of first degree of unspecified multiple fingers (nail), not including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.139S	Burn of first degree of unspecified multiple fingers (nail), not including thumb, sequela	Diagnosis	ICD-10-CM
T23.14	Burn of first degree of multiple fingers (nail), including thumb	Diagnosis	ICD-10-CM
T23.141	Burn of first degree of multiple right fingers (nail), including thumb	Diagnosis	ICD-10-CM
T23.141A	Burn of first degree of multiple right fingers (nail), including thumb, initial	Diagnosis	ICD-10-CM
T23.141D	Burn of first degree of multiple right fingers (nail), including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.141S	Burn of first degree of multiple right fingers (nail), including thumb, sequela	Diagnosis	ICD-10-CM
T23.142	Burn of first degree of multiple left fingers (nail), including thumb	Diagnosis	ICD-10-CM
T23.142A	Burn of first degree of multiple left fingers (nail), including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.142D	Burn of first degree of multiple left fingers (nail), including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.142S	Burn of first degree of multiple left fingers (nail), including thumb, sequela	Diagnosis	ICD-10-CM
T23.149	Burn of first degree of unspecified multiple fingers (nail), including thumb	Diagnosis	ICD-10-CM
T23.149A	Burn of first degree of unspecified multiple fingers (nail), including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.149D	Burn of first degree of unspecified multiple fingers (nail), including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.149S	Burn of first degree of unspecified multiple fingers (nail), including thumb, sequela	Diagnosis	ICD-10-CM
T23.15	Burn of first degree of palm	Diagnosis	ICD-10-CM
T23.151	Burn of first degree of right palm	Diagnosis	ICD-10-CM
T23.151A	Burn of first degree of right palm, initial encounter	Diagnosis	ICD-10-CM
T23.151D	Burn of first degree of right palm, subsequent encounter	Diagnosis	ICD-10-CM
T23.151S	Burn of first degree of right palm, sequela	Diagnosis	ICD-10-CM
T23.152	Burn of first degree of left palm	Diagnosis	ICD-10-CM
T23.152A	Burn of first degree of left palm, initial encounter	Diagnosis	ICD-10-CM
T23.152D	Burn of first degree of left palm, subsequent encounter	Diagnosis	ICD-10-CM
T23.152S	Burn of first degree of left palm, sequela	Diagnosis	ICD-10-CM
T23.159	Burn of first degree of unspecified palm	Diagnosis	ICD-10-CM
T23.159A	Burn of first degree of unspecified palm, initial encounter	Diagnosis	ICD-10-CM
T23.159D	Burn of first degree of unspecified palm, subsequent encounter	Diagnosis	ICD-10-CM
T23.159S	Burn of first degree of unspecified palm, sequela	Diagnosis	ICD-10-CM
T23.16	Burn of first degree of back of hand	Diagnosis	ICD-10-CM
T23.161	Burn of first degree of back of right hand	Diagnosis	ICD-10-CM
T23.161A	Burn of first degree of back of right hand, initial encounter	Diagnosis	ICD-10-CM
T23.161D	Burn of first degree of back of right hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.161S	Burn of first degree of back of right hand, sequela	Diagnosis	ICD-10-CM
T23.162	Burn of first degree of back of left hand	Diagnosis	ICD-10-CM
T23.162A	Burn of first degree of back of left hand, initial encounter	Diagnosis	ICD-10-CM
T23.162D	Burn of first degree of back of left hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.162S	Burn of first degree of back of left hand, sequela	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T23.169	Burn of first degree of back of unspecified hand	Diagnosis	ICD-10-CM
T23.169A	Burn of first degree of back of unspecified hand, initial encounter	Diagnosis	ICD-10-CM
T23.169D	Burn of first degree of back of unspecified hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.169S	Burn of first degree of back of unspecified hand, sequela	Diagnosis	ICD-10-CM
T23.17	Burn of first degree of wrist	Diagnosis	ICD-10-CM
T23.171	Burn of first degree of right wrist	Diagnosis	ICD-10-CM
T23.171A	Burn of first degree of right wrist, initial encounter	Diagnosis	ICD-10-CM
T23.171D	Burn of first degree of right wrist, subsequent encounter	Diagnosis	ICD-10-CM
T23.171S	Burn of first degree of right wrist, sequela	Diagnosis	ICD-10-CM
T23.172	Burn of first degree of left wrist	Diagnosis	ICD-10-CM
T23.172A	Burn of first degree of left wrist, initial encounter	Diagnosis	ICD-10-CM
T23.172D	Burn of first degree of left wrist, subsequent encounter	Diagnosis	ICD-10-CM
T23.172S	Burn of first degree of left wrist, sequela	Diagnosis	ICD-10-CM
T23.179	Burn of first degree of unspecified wrist	Diagnosis	ICD-10-CM
T23.179A	Burn of first degree of unspecified wrist, initial encounter	Diagnosis	ICD-10-CM
T23.179D	Burn of first degree of unspecified wrist, subsequent encounter	Diagnosis	ICD-10-CM
T23.179S	Burn of first degree of unspecified wrist, sequela	Diagnosis	ICD-10-CM
T23.19	Burn of first degree of multiple sites of wrist and hand	Diagnosis	ICD-10-CM
T23.191	Burn of first degree of multiple sites of right wrist and hand	Diagnosis	ICD-10-CM
T23.191A	Burn of first degree of multiple sites of right wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T23.191D	Burn of first degree of multiple sites of right wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.191S	Burn of first degree of multiple sites of right wrist and hand, sequela	Diagnosis	ICD-10-CM
T23.192	Burn of first degree of multiple sites of left wrist and hand	Diagnosis	ICD-10-CM
T23.192A	Burn of first degree of multiple sites of left wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T23.192D	Burn of first degree of multiple sites of left wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.192S	Burn of first degree of multiple sites of left wrist and hand, sequela	Diagnosis	ICD-10-CM
T23.199	Burn of first degree of multiple sites of unspecified wrist and hand	Diagnosis	ICD-10-CM
T23.199A	Burn of first degree of multiple sites of unspecified wrist and hand, initial	Diagnosis	ICD-10-CM
T23.199D	Burn of first degree of multiple sites of unspecified wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.199S	Burn of first degree of multiple sites of unspecified wrist and hand, sequela	Diagnosis	ICD-10-CM
T23.2	Burn of second degree of wrist and hand	Diagnosis	ICD-10-CM
T23.20	Burn of second degree of hand, unspecified site	Diagnosis	ICD-10-CM
T23.201	Burn of second degree of right hand, unspecified site	Diagnosis	ICD-10-CM
T23.201A	Burn of second degree of right hand, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T23.201D	Burn of second degree of right hand, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T23.201S	Burn of second degree of right hand, unspecified site, sequela	Diagnosis	ICD-10-CM
T23.202	Burn of second degree of left hand, unspecified site	Diagnosis	ICD-10-CM
T23.202A	Burn of second degree of left hand, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T23.202D	Burn of second degree of left hand, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T23.202S	Burn of second degree of left hand, unspecified site, sequela	Diagnosis	ICD-10-CM
T23.209	Burn of second degree of unspecified hand, unspecified site	Diagnosis	ICD-10-CM
T23.209A	Burn of second degree of unspecified hand, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T23.209D	Burn of second degree of unspecified hand, unspecified site, subsequent	Diagnosis	ICD-10-CM
T23.209S	Burn of second degree of unspecified hand, unspecified site, sequela	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T23.21	Burn of second degree of thumb (nail)	Diagnosis	ICD-10-CM
T23.211	Burn of second degree of right thumb (nail)	Diagnosis	ICD-10-CM
T23.211A	Burn of second degree of right thumb (nail), initial encounter	Diagnosis	ICD-10-CM
T23.211D	Burn of second degree of right thumb (nail), subsequent encounter	Diagnosis	ICD-10-CM
T23.211S	Burn of second degree of right thumb (nail), sequela	Diagnosis	ICD-10-CM
T23.212	Burn of second degree of left thumb (nail)	Diagnosis	ICD-10-CM
T23.212A	Burn of second degree of left thumb (nail), initial encounter	Diagnosis	ICD-10-CM
T23.212D	Burn of second degree of left thumb (nail), subsequent encounter	Diagnosis	ICD-10-CM
T23.212S	Burn of second degree of left thumb (nail), sequela	Diagnosis	ICD-10-CM
T23.219	Burn of second degree of unspecified thumb (nail)	Diagnosis	ICD-10-CM
T23.219A	Burn of second degree of unspecified thumb (nail), initial encounter	Diagnosis	ICD-10-CM
T23.219D	Burn of second degree of unspecified thumb (nail), subsequent encounter	Diagnosis	ICD-10-CM
T23.219S	Burn of second degree of unspecified thumb (nail), sequela	Diagnosis	ICD-10-CM
T23.22	Burn of second degree of single finger (nail) except thumb	Diagnosis	ICD-10-CM
T23.221	Burn of second degree of single right finger (nail) except thumb	Diagnosis	ICD-10-CM
T23.221A	Burn of second degree of single right finger (nail) except thumb, initial encounter	Diagnosis	ICD-10-CM
T23.221D	Burn of second degree of single right finger (nail) except thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.221S	Burn of second degree of single right finger (nail) except thumb, sequela	Diagnosis	ICD-10-CM
T23.222	Burn of second degree of single left finger (nail) except thumb	Diagnosis	ICD-10-CM
T23.222A	Burn of second degree of single left finger (nail) except thumb, initial encounter	Diagnosis	ICD-10-CM
T23.222D	Burn of second degree of single left finger (nail) except thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.222S	Burn of second degree of single left finger (nail) except thumb, sequela	Diagnosis	ICD-10-CM
T23.229	Burn of second degree of unspecified single finger (nail) except thumb	Diagnosis	ICD-10-CM
T23.229A	Burn of second degree of unspecified single finger (nail) except thumb, initial encounter	Diagnosis	ICD-10-CM
T23.229D	Burn of second degree of unspecified single finger (nail) except thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.229S	Burn of second degree of unspecified single finger (nail) except thumb, sequela	Diagnosis	ICD-10-CM
T23.23	Burn of second degree of multiple fingers (nail), not including thumb	Diagnosis	ICD-10-CM
T23.231	Burn of second degree of multiple right fingers (nail), not including thumb	Diagnosis	ICD-10-CM
T23.231A	Burn of second degree of multiple right fingers (nail), not including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.231D	Burn of second degree of multiple right fingers (nail), not including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.231S	Burn of second degree of multiple right fingers (nail), not including thumb, sequela	Diagnosis	ICD-10-CM
T23.232	Burn of second degree of multiple left fingers (nail), not including thumb	Diagnosis	ICD-10-CM
T23.232A	Burn of second degree of multiple left fingers (nail), not including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.232D	Burn of second degree of multiple left fingers (nail), not including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.232S	Burn of second degree of multiple left fingers (nail), not including thumb, sequela	Diagnosis	ICD-10-CM
T23.239	Burn of second degree of unspecified multiple fingers (nail), not including thumb	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T23.239A	Burn of second degree of unspecified multiple fingers (nail), not including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.239D	Burn of second degree of unspecified multiple fingers (nail), not including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.239S	Burn of second degree of unspecified multiple fingers (nail), not including thumb, sequela	Diagnosis	ICD-10-CM
T23.24	Burn of second degree of multiple fingers (nail), including thumb	Diagnosis	ICD-10-CM
T23.241	Burn of second degree of multiple right fingers (nail), including thumb	Diagnosis	ICD-10-CM
T23.241A	Burn of second degree of multiple right fingers (nail), including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.241D	Burn of second degree of multiple right fingers (nail), including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.241S	Burn of second degree of multiple right fingers (nail), including thumb, sequela	Diagnosis	ICD-10-CM
T23.242	Burn of second degree of multiple left fingers (nail), including thumb	Diagnosis	ICD-10-CM
T23.242A	Burn of second degree of multiple left fingers (nail), including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.242D	Burn of second degree of multiple left fingers (nail), including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.242S	Burn of second degree of multiple left fingers (nail), including thumb, sequela	Diagnosis	ICD-10-CM
T23.249	Burn of second degree of unspecified multiple fingers (nail), including thumb	Diagnosis	ICD-10-CM
T23.249A	Burn of second degree of unspecified multiple fingers (nail), including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.249D	Burn of second degree of unspecified multiple fingers (nail), including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.249S	Burn of second degree of unspecified multiple fingers (nail), including thumb, sequela	Diagnosis	ICD-10-CM
T23.25	Burn of second degree of palm	Diagnosis	ICD-10-CM
T23.251	Burn of second degree of right palm	Diagnosis	ICD-10-CM
T23.251A	Burn of second degree of right palm, initial encounter	Diagnosis	ICD-10-CM
T23.251D	Burn of second degree of right palm, subsequent encounter	Diagnosis	ICD-10-CM
T23.251S	Burn of second degree of right palm, sequela	Diagnosis	ICD-10-CM
T23.252	Burn of second degree of left palm	Diagnosis	ICD-10-CM
T23.252A	Burn of second degree of left palm, initial encounter	Diagnosis	ICD-10-CM
T23.252D	Burn of second degree of left palm, subsequent encounter	Diagnosis	ICD-10-CM
T23.252S	Burn of second degree of left palm, sequela	Diagnosis	ICD-10-CM
T23.259	Burn of second degree of unspecified palm	Diagnosis	ICD-10-CM
T23.259A	Burn of second degree of unspecified palm, initial encounter	Diagnosis	ICD-10-CM
T23.259D	Burn of second degree of unspecified palm, subsequent encounter	Diagnosis	ICD-10-CM
T23.259S	Burn of second degree of unspecified palm, sequela	Diagnosis	ICD-10-CM
T23.26	Burn of second degree of back of hand	Diagnosis	ICD-10-CM
T23.261	Burn of second degree of back of right hand	Diagnosis	ICD-10-CM
T23.261A	Burn of second degree of back of right hand, initial encounter	Diagnosis	ICD-10-CM
T23.261D	Burn of second degree of back of right hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.261S	Burn of second degree of back of right hand, sequela	Diagnosis	ICD-10-CM
T23.262	Burn of second degree of back of left hand	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T23.262A	Burn of second degree of back of left hand, initial encounter	Diagnosis	ICD-10-CM
T23.262D	Burn of second degree of back of left hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.262S	Burn of second degree of back of left hand, sequela	Diagnosis	ICD-10-CM
T23.269	Burn of second degree of back of unspecified hand	Diagnosis	ICD-10-CM
T23.269A	Burn of second degree of back of unspecified hand, initial encounter	Diagnosis	ICD-10-CM
T23.269D	Burn of second degree of back of unspecified hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.269S	Burn of second degree of back of unspecified hand, sequela	Diagnosis	ICD-10-CM
T23.27	Burn of second degree of wrist	Diagnosis	ICD-10-CM
T23.271	Burn of second degree of right wrist	Diagnosis	ICD-10-CM
T23.271A	Burn of second degree of right wrist, initial encounter	Diagnosis	ICD-10-CM
T23.271D	Burn of second degree of right wrist, subsequent encounter	Diagnosis	ICD-10-CM
T23.271S	Burn of second degree of right wrist, sequela	Diagnosis	ICD-10-CM
T23.272	Burn of second degree of left wrist	Diagnosis	ICD-10-CM
T23.272A	Burn of second degree of left wrist, initial encounter	Diagnosis	ICD-10-CM
T23.272D	Burn of second degree of left wrist, subsequent encounter	Diagnosis	ICD-10-CM
T23.272S	Burn of second degree of left wrist, sequela	Diagnosis	ICD-10-CM
T23.279	Burn of second degree of unspecified wrist	Diagnosis	ICD-10-CM
T23.279A	Burn of second degree of unspecified wrist, initial encounter	Diagnosis	ICD-10-CM
T23.279D	Burn of second degree of unspecified wrist, subsequent encounter	Diagnosis	ICD-10-CM
T23.279S	Burn of second degree of unspecified wrist, sequela	Diagnosis	ICD-10-CM
T23.29	Burn of second degree of multiple sites of wrist and hand	Diagnosis	ICD-10-CM
T23.291	Burn of second degree of multiple sites of right wrist and hand	Diagnosis	ICD-10-CM
T23.291A	Burn of second degree of multiple sites of right wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T23.291D	Burn of second degree of multiple sites of right wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.291S	Burn of second degree of multiple sites of right wrist and hand, sequela	Diagnosis	ICD-10-CM
T23.292	Burn of second degree of multiple sites of left wrist and hand	Diagnosis	ICD-10-CM
T23.292A	Burn of second degree of multiple sites of left wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T23.292D	Burn of second degree of multiple sites of left wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.292S	Burn of second degree of multiple sites of left wrist and hand, sequela	Diagnosis	ICD-10-CM
T23.299	Burn of second degree of multiple sites of unspecified wrist and hand	Diagnosis	ICD-10-CM
T23.299A	Burn of second degree of multiple sites of unspecified wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T23.299D	Burn of second degree of multiple sites of unspecified wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.299S	Burn of second degree of multiple sites of unspecified wrist and hand, sequela	Diagnosis	ICD-10-CM
T23.3	Burn of third degree of wrist and hand	Diagnosis	ICD-10-CM
T23.30	Burn of third degree of hand, unspecified site	Diagnosis	ICD-10-CM
T23.301	Burn of third degree of right hand, unspecified site	Diagnosis	ICD-10-CM
T23.301A	Burn of third degree of right hand, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T23.301D	Burn of third degree of right hand, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T23.301S	Burn of third degree of right hand, unspecified site, sequela	Diagnosis	ICD-10-CM
T23.302	Burn of third degree of left hand, unspecified site	Diagnosis	ICD-10-CM
T23.302A	Burn of third degree of left hand, unspecified site, initial encounter	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
T23.302D	Burn of third degree of left hand, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T23.302S	Burn of third degree of left hand, unspecified site, sequela	Diagnosis	ICD-10-CM
T23.309	Burn of third degree of unspecified hand, unspecified site	Diagnosis	ICD-10-CM
T23.309A	Burn of third degree of unspecified hand, unspecified site, initial encounter	Diagnosis	ICD-10-CM
T23.309D	Burn of third degree of unspecified hand, unspecified site, subsequent encounter	Diagnosis	ICD-10-CM
T23.309S	Burn of third degree of unspecified hand, unspecified site, sequela	Diagnosis	ICD-10-CM
T23.31	Burn of third degree of thumb (nail)	Diagnosis	ICD-10-CM
T23.311	Burn of third degree of right thumb (nail)	Diagnosis	ICD-10-CM
T23.311A	Burn of third degree of right thumb (nail), initial encounter	Diagnosis	ICD-10-CM
T23.311D	Burn of third degree of right thumb (nail), subsequent encounter	Diagnosis	ICD-10-CM
T23.311S	Burn of third degree of right thumb (nail), sequela	Diagnosis	ICD-10-CM
T23.312	Burn of third degree of left thumb (nail)	Diagnosis	ICD-10-CM
T23.312A	Burn of third degree of left thumb (nail), initial encounter	Diagnosis	ICD-10-CM
T23.312D	Burn of third degree of left thumb (nail), subsequent encounter	Diagnosis	ICD-10-CM
T23.312S	Burn of third degree of left thumb (nail), sequela	Diagnosis	ICD-10-CM
T23.319	Burn of third degree of unspecified thumb (nail)	Diagnosis	ICD-10-CM
T23.319A	Burn of third degree of unspecified thumb (nail), initial encounter	Diagnosis	ICD-10-CM
T23.319D	Burn of third degree of unspecified thumb (nail), subsequent encounter	Diagnosis	ICD-10-CM
T23.319S	Burn of third degree of unspecified thumb (nail), sequela	Diagnosis	ICD-10-CM
T23.32	Burn of third degree of single finger (nail) except thumb	Diagnosis	ICD-10-CM
T23.321	Burn of third degree of single right finger (nail) except thumb	Diagnosis	ICD-10-CM
T23.321A	Burn of third degree of single right finger (nail) except thumb, initial encounter	Diagnosis	ICD-10-CM
T23.321D	Burn of third degree of single right finger (nail) except thumb, subsequent	Diagnosis	ICD-10-CM
T23.321S	Burn of third degree of single right finger (nail) except thumb, sequela	Diagnosis	ICD-10-CM
T23.322	Burn of third degree of single left finger (nail) except thumb	Diagnosis	ICD-10-CM
T23.322A	Burn of third degree of single left finger (nail) except thumb, initial encounter	Diagnosis	ICD-10-CM
T23.322D	Burn of third degree of single left finger (nail) except thumb, subsequent	Diagnosis	ICD-10-CM
T23.322S	Burn of third degree of single left finger (nail) except thumb, sequela	Diagnosis	ICD-10-CM
T23.329	Burn of third degree of unspecified single finger (nail) except thumb	Diagnosis	ICD-10-CM
T23.329A	Burn of third degree of unspecified single finger (nail) except thumb, initial encounter	Diagnosis	ICD-10-CM
T23.329D	Burn of third degree of unspecified single finger (nail) except thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.329S	Burn of third degree of unspecified single finger (nail) except thumb, sequela	Diagnosis	ICD-10-CM
T23.33	Burn of third degree of multiple fingers (nail), not including thumb	Diagnosis	ICD-10-CM
T23.331	Burn of third degree of multiple right fingers (nail), not including thumb	Diagnosis	ICD-10-CM
T23.331A	Burn of third degree of multiple right fingers (nail), not including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.331D	Burn of third degree of multiple right fingers (nail), not including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.331S	Burn of third degree of multiple right fingers (nail), not including thumb, sequela	Diagnosis	ICD-10-CM
T23.332	Burn of third degree of multiple left fingers (nail), not including thumb	Diagnosis	ICD-10-CM
T23.332A	Burn of third degree of multiple left fingers (nail), not including thumb, initial encounter	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T23.332D	Burn of third degree of multiple left fingers (nail), not including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.332S	Burn of third degree of multiple left fingers (nail), not including thumb, sequela	Diagnosis	ICD-10-CM
T23.339	Burn of third degree of unspecified multiple fingers (nail), not including thumb	Diagnosis	ICD-10-CM
T23.339A	Burn of third degree of unspecified multiple fingers (nail), not including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.339D	Burn of third degree of unspecified multiple fingers (nail), not including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.339S	Burn of third degree of unspecified multiple fingers (nail), not including thumb, sequela	Diagnosis	ICD-10-CM
T23.34	Burn of third degree of multiple fingers (nail), including thumb	Diagnosis	ICD-10-CM
T23.341	Burn of third degree of multiple right fingers (nail), including thumb	Diagnosis	ICD-10-CM
T23.341A	Burn of third degree of multiple right fingers (nail), including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.341D	Burn of third degree of multiple right fingers (nail), including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.341S	Burn of third degree of multiple right fingers (nail), including thumb, sequela	Diagnosis	ICD-10-CM
T23.342	Burn of third degree of multiple left fingers (nail), including thumb	Diagnosis	ICD-10-CM
T23.342A	Burn of third degree of multiple left fingers (nail), including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.342D	Burn of third degree of multiple left fingers (nail), including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.342S	Burn of third degree of multiple left fingers (nail), including thumb, sequela	Diagnosis	ICD-10-CM
T23.349	Burn of third degree of unspecified multiple fingers (nail), including thumb	Diagnosis	ICD-10-CM
T23.349A	Burn of third degree of unspecified multiple fingers (nail), including thumb, initial encounter	Diagnosis	ICD-10-CM
T23.349D	Burn of third degree of unspecified multiple fingers (nail), including thumb, subsequent encounter	Diagnosis	ICD-10-CM
T23.349S	Burn of third degree of unspecified multiple fingers (nail), including thumb, sequela	Diagnosis	ICD-10-CM
T23.35	Burn of third degree of palm	Diagnosis	ICD-10-CM
T23.351	Burn of third degree of right palm	Diagnosis	ICD-10-CM
T23.351A	Burn of third degree of right palm, initial encounter	Diagnosis	ICD-10-CM
T23.351D	Burn of third degree of right palm, subsequent encounter	Diagnosis	ICD-10-CM
T23.351S	Burn of third degree of right palm, sequela	Diagnosis	ICD-10-CM
T23.352	Burn of third degree of left palm	Diagnosis	ICD-10-CM
T23.352A	Burn of third degree of left palm, initial encounter	Diagnosis	ICD-10-CM
T23.352D	Burn of third degree of left palm, subsequent encounter	Diagnosis	ICD-10-CM
T23.352S	Burn of third degree of left palm, sequela	Diagnosis	ICD-10-CM
T23.359	Burn of third degree of unspecified palm	Diagnosis	ICD-10-CM
T23.359A	Burn of third degree of unspecified palm, initial encounter	Diagnosis	ICD-10-CM
T23.359D	Burn of third degree of unspecified palm, subsequent encounter	Diagnosis	ICD-10-CM
T23.359S	Burn of third degree of unspecified palm, sequela	Diagnosis	ICD-10-CM
T23.36	Burn of third degree of back of hand	Diagnosis	ICD-10-CM
T23.361	Burn of third degree of back of right hand	Diagnosis	ICD-10-CM
T23.361A	Burn of third degree of back of right hand, initial encounter	Diagnosis	ICD-10-CM
T23.361D	Burn of third degree of back of right hand, subsequent encounter	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
T23.361S	Burn of third degree of back of right hand, sequela	Diagnosis	ICD-10-CM
T23.362	Burn of third degree of back of left hand	Diagnosis	ICD-10-CM
T23.362A	Burn of third degree of back of left hand, initial encounter	Diagnosis	ICD-10-CM
T23.362D	Burn of third degree of back of left hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.362S	Burn of third degree of back of left hand, sequela	Diagnosis	ICD-10-CM
T23.369	Burn of third degree of back of unspecified hand	Diagnosis	ICD-10-CM
T23.369A	Burn of third degree of back of unspecified hand, initial encounter	Diagnosis	ICD-10-CM
T23.369D	Burn of third degree of back of unspecified hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.369S	Burn of third degree of back of unspecified hand, sequela	Diagnosis	ICD-10-CM
T23.37	Burn of third degree of wrist	Diagnosis	ICD-10-CM
T23.371	Burn of third degree of right wrist	Diagnosis	ICD-10-CM
T23.371A	Burn of third degree of right wrist, initial encounter	Diagnosis	ICD-10-CM
T23.371D	Burn of third degree of right wrist, subsequent encounter	Diagnosis	ICD-10-CM
T23.371S	Burn of third degree of right wrist, sequela	Diagnosis	ICD-10-CM
T23.372	Burn of third degree of left wrist	Diagnosis	ICD-10-CM
T23.372A	Burn of third degree of left wrist, initial encounter	Diagnosis	ICD-10-CM
T23.372D	Burn of third degree of left wrist, subsequent encounter	Diagnosis	ICD-10-CM
T23.372S	Burn of third degree of left wrist, sequela	Diagnosis	ICD-10-CM
T23.379	Burn of third degree of unspecified wrist	Diagnosis	ICD-10-CM
T23.379A	Burn of third degree of unspecified wrist, initial encounter	Diagnosis	ICD-10-CM
T23.379D	Burn of third degree of unspecified wrist, subsequent encounter	Diagnosis	ICD-10-CM
T23.379S	Burn of third degree of unspecified wrist, sequela	Diagnosis	ICD-10-CM
T23.39	Burn of third degree of multiple sites of wrist and hand	Diagnosis	ICD-10-CM
T23.391	Burn of third degree of multiple sites of right wrist and hand	Diagnosis	ICD-10-CM
T23.391A	Burn of third degree of multiple sites of right wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T23.391D	Burn of third degree of multiple sites of right wrist and hand, subsequent	Diagnosis	ICD-10-CM
T23.391S	Burn of third degree of multiple sites of right wrist and hand, sequela	Diagnosis	ICD-10-CM
T23.392	Burn of third degree of multiple sites of left wrist and hand	Diagnosis	ICD-10-CM
T23.392A	Burn of third degree of multiple sites of left wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T23.392D	Burn of third degree of multiple sites of left wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.392S	Burn of third degree of multiple sites of left wrist and hand, sequela	Diagnosis	ICD-10-CM
T23.399	Burn of third degree of multiple sites of unspecified wrist and hand	Diagnosis	ICD-10-CM
T23.399A	Burn of third degree of multiple sites of unspecified wrist and hand, initial encounter	Diagnosis	ICD-10-CM
T23.399D	Burn of third degree of multiple sites of unspecified wrist and hand, subsequent encounter	Diagnosis	ICD-10-CM
T23.399S	Burn of third degree of multiple sites of unspecified wrist and hand, sequela	Diagnosis	ICD-10-CM
T24	Burn and corrosion of lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.0	Burn of unspecified degree of lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.00	Burn of unspecified degree of unspecified site of lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.001	Burn of unspecified degree of unspecified site of right lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.001A	Burn of unspecified degree of unspecified site of right lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
T24.001D	Burn of unspecified degree of unspecified site of right lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.001S	Burn of unspecified degree of unspecified site of right lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.002	Burn of unspecified degree of unspecified site of left lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.002A	Burn of unspecified degree of unspecified site of left lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.002D	Burn of unspecified degree of unspecified site of left lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.002S	Burn of unspecified degree of unspecified site of left lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.009	Burn of unspecified degree of unspecified site of unspecified lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.009A	Burn of unspecified degree of unspecified site of unspecified lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.009D	Burn of unspecified degree of unspecified site of unspecified lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.009S	Burn of unspecified degree of unspecified site of unspecified lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.01	Burn of unspecified degree of thigh	Diagnosis	ICD-10-CM
T24.011	Burn of unspecified degree of right thigh	Diagnosis	ICD-10-CM
T24.011A	Burn of unspecified degree of right thigh, initial encounter	Diagnosis	ICD-10-CM
T24.011D	Burn of unspecified degree of right thigh, subsequent encounter	Diagnosis	ICD-10-CM
T24.011S	Burn of unspecified degree of right thigh, sequela	Diagnosis	ICD-10-CM
T24.012	Burn of unspecified degree of left thigh	Diagnosis	ICD-10-CM
T24.012A	Burn of unspecified degree of left thigh, initial encounter	Diagnosis	ICD-10-CM
T24.012D	Burn of unspecified degree of left thigh, subsequent encounter	Diagnosis	ICD-10-CM
T24.012S	Burn of unspecified degree of left thigh, sequela	Diagnosis	ICD-10-CM
T24.019	Burn of unspecified degree of unspecified thigh	Diagnosis	ICD-10-CM
T24.019A	Burn of unspecified degree of unspecified thigh, initial encounter	Diagnosis	ICD-10-CM
T24.019D	Burn of unspecified degree of unspecified thigh, subsequent encounter	Diagnosis	ICD-10-CM
T24.019S	Burn of unspecified degree of unspecified thigh, sequela	Diagnosis	ICD-10-CM
T24.02	Burn of unspecified degree of knee	Diagnosis	ICD-10-CM
T24.021	Burn of unspecified degree of right knee	Diagnosis	ICD-10-CM
T24.021A	Burn of unspecified degree of right knee, initial encounter	Diagnosis	ICD-10-CM
T24.021D	Burn of unspecified degree of right knee, subsequent encounter	Diagnosis	ICD-10-CM
T24.021S	Burn of unspecified degree of right knee, sequela	Diagnosis	ICD-10-CM
T24.022	Burn of unspecified degree of left knee	Diagnosis	ICD-10-CM
T24.022A	Burn of unspecified degree of left knee, initial encounter	Diagnosis	ICD-10-CM
T24.022D	Burn of unspecified degree of left knee, subsequent encounter	Diagnosis	ICD-10-CM
T24.022S	Burn of unspecified degree of left knee, sequela	Diagnosis	ICD-10-CM
T24.029	Burn of unspecified degree of unspecified knee	Diagnosis	ICD-10-CM
T24.029A	Burn of unspecified degree of unspecified knee, initial encounter	Diagnosis	ICD-10-CM
T24.029D	Burn of unspecified degree of unspecified knee, subsequent encounter	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
T24.029S	Burn of unspecified degree of unspecified knee, sequela	Diagnosis	ICD-10-CM
T24.03	Burn of unspecified degree of lower leg	Diagnosis	ICD-10-CM
T24.031	Burn of unspecified degree of right lower leg	Diagnosis	ICD-10-CM
T24.031A	Burn of unspecified degree of right lower leg, initial encounter	Diagnosis	ICD-10-CM
T24.031D	Burn of unspecified degree of right lower leg, subsequent encounter	Diagnosis	ICD-10-CM
T24.031S	Burn of unspecified degree of right lower leg, sequela	Diagnosis	ICD-10-CM
T24.032	Burn of unspecified degree of left lower leg	Diagnosis	ICD-10-CM
T24.032A	Burn of unspecified degree of left lower leg, initial encounter	Diagnosis	ICD-10-CM
T24.032D	Burn of unspecified degree of left lower leg, subsequent encounter	Diagnosis	ICD-10-CM
T24.032S	Burn of unspecified degree of left lower leg, sequela	Diagnosis	ICD-10-CM
T24.039	Burn of unspecified degree of unspecified lower leg	Diagnosis	ICD-10-CM
T24.039A	Burn of unspecified degree of unspecified lower leg, initial encounter	Diagnosis	ICD-10-CM
T24.039D	Burn of unspecified degree of unspecified lower leg, subsequent encounter	Diagnosis	ICD-10-CM
T24.039S	Burn of unspecified degree of unspecified lower leg, sequela	Diagnosis	ICD-10-CM
T24.09	Burn of unspecified degree of multiple sites of lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.091	Burn of unspecified degree of multiple sites of right lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.091A	Burn of unspecified degree of multiple sites of right lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.091D	Burn of unspecified degree of multiple sites of right lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.091S	Burn of unspecified degree of multiple sites of right lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.092	Burn of unspecified degree of multiple sites of left lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.092A	Burn of unspecified degree of multiple sites of left lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.092D	Burn of unspecified degree of multiple sites of left lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.092S	Burn of unspecified degree of multiple sites of left lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.099	Burn of unspecified degree of multiple sites of unspecified lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.099A	Burn of unspecified degree of multiple sites of unspecified lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.099D	Burn of unspecified degree of multiple sites of unspecified lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.099S	Burn of unspecified degree of multiple sites of unspecified lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.1	Burn of first degree of lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.10	Burn of first degree of unspecified site of lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.101	Burn of first degree of unspecified site of right lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.101A	Burn of first degree of unspecified site of right lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.101D	Burn of first degree of unspecified site of right lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
T24.101S	Burn of first degree of unspecified site of right lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.102	Burn of first degree of unspecified site of left lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.102A	Burn of first degree of unspecified site of left lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.102D	Burn of first degree of unspecified site of left lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.102S	Burn of first degree of unspecified site of left lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.109	Burn of first degree of unspecified site of unspecified lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.109A	Burn of first degree of unspecified site of unspecified lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.109D	Burn of first degree of unspecified site of unspecified lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.109S	Burn of first degree of unspecified site of unspecified lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.11	Burn of first degree of thigh	Diagnosis	ICD-10-CM
T24.111	Burn of first degree of right thigh	Diagnosis	ICD-10-CM
T24.111A	Burn of first degree of right thigh, initial encounter	Diagnosis	ICD-10-CM
T24.111D	Burn of first degree of right thigh, subsequent encounter	Diagnosis	ICD-10-CM
T24.111S	Burn of first degree of right thigh, sequela	Diagnosis	ICD-10-CM
T24.112	Burn of first degree of left thigh	Diagnosis	ICD-10-CM
T24.112A	Burn of first degree of left thigh, initial encounter	Diagnosis	ICD-10-CM
T24.112D	Burn of first degree of left thigh, subsequent encounter	Diagnosis	ICD-10-CM
T24.112S	Burn of first degree of left thigh, sequela	Diagnosis	ICD-10-CM
T24.119	Burn of first degree of unspecified thigh	Diagnosis	ICD-10-CM
T24.119A	Burn of first degree of unspecified thigh, initial encounter	Diagnosis	ICD-10-CM
T24.119D	Burn of first degree of unspecified thigh, subsequent encounter	Diagnosis	ICD-10-CM
T24.119S	Burn of first degree of unspecified thigh, sequela	Diagnosis	ICD-10-CM
T24.12	Burn of first degree of knee	Diagnosis	ICD-10-CM
T24.121	Burn of first degree of right knee	Diagnosis	ICD-10-CM
T24.121A	Burn of first degree of right knee, initial encounter	Diagnosis	ICD-10-CM
T24.121D	Burn of first degree of right knee, subsequent encounter	Diagnosis	ICD-10-CM
T24.121S	Burn of first degree of right knee, sequela	Diagnosis	ICD-10-CM
T24.122	Burn of first degree of left knee	Diagnosis	ICD-10-CM
T24.122A	Burn of first degree of left knee, initial encounter	Diagnosis	ICD-10-CM
T24.122D	Burn of first degree of left knee, subsequent encounter	Diagnosis	ICD-10-CM
T24.122S	Burn of first degree of left knee, sequela	Diagnosis	ICD-10-CM
T24.129	Burn of first degree of unspecified knee	Diagnosis	ICD-10-CM
T24.129A	Burn of first degree of unspecified knee, initial encounter	Diagnosis	ICD-10-CM
T24.129D	Burn of first degree of unspecified knee, subsequent encounter	Diagnosis	ICD-10-CM
T24.129S	Burn of first degree of unspecified knee, sequela	Diagnosis	ICD-10-CM
T24.13	Burn of first degree of lower leg	Diagnosis	ICD-10-CM
T24.131	Burn of first degree of right lower leg	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
T24.131A	Burn of first degree of right lower leg, initial encounter	Diagnosis	ICD-10-CM
T24.131D	Burn of first degree of right lower leg, subsequent encounter	Diagnosis	ICD-10-CM
T24.131S	Burn of first degree of right lower leg, sequela	Diagnosis	ICD-10-CM
T24.132	Burn of first degree of left lower leg	Diagnosis	ICD-10-CM
T24.132A	Burn of first degree of left lower leg, initial encounter	Diagnosis	ICD-10-CM
T24.132D	Burn of first degree of left lower leg, subsequent encounter	Diagnosis	ICD-10-CM
T24.132S	Burn of first degree of left lower leg, sequela	Diagnosis	ICD-10-CM
T24.139	Burn of first degree of unspecified lower leg	Diagnosis	ICD-10-CM
T24.139A	Burn of first degree of unspecified lower leg, initial encounter	Diagnosis	ICD-10-CM
T24.139D	Burn of first degree of unspecified lower leg, subsequent encounter	Diagnosis	ICD-10-CM
T24.139S	Burn of first degree of unspecified lower leg, sequela	Diagnosis	ICD-10-CM
T24.19	Burn of first degree of multiple sites of lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.191	Burn of first degree of multiple sites of right lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.191A	Burn of first degree of multiple sites of right lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.191D	Burn of first degree of multiple sites of right lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.191S	Burn of first degree of multiple sites of right lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.192	Burn of first degree of multiple sites of left lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.192A	Burn of first degree of multiple sites of left lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.192D	Burn of first degree of multiple sites of left lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.192S	Burn of first degree of multiple sites of left lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.199	Burn of first degree of multiple sites of unspecified lower limb, except ankle and	Diagnosis	ICD-10-CM
T24.199A	Burn of first degree of multiple sites of unspecified lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.199D	Burn of first degree of multiple sites of unspecified lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.199S	Burn of first degree of multiple sites of unspecified lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.2	Burn of second degree of lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.20	Burn of second degree of unspecified site of lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.201	Burn of second degree of unspecified site of right lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.201A	Burn of second degree of unspecified site of right lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.201D	Burn of second degree of unspecified site of right lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.201S	Burn of second degree of unspecified site of right lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.202	Burn of second degree of unspecified site of left lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.202A	Burn of second degree of unspecified site of left lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
T24.202D	Burn of second degree of unspecified site of left lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.202S	Burn of second degree of unspecified site of left lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.209	Burn of second degree of unspecified site of unspecified lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.209A	Burn of second degree of unspecified site of unspecified lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.209D	Burn of second degree of unspecified site of unspecified lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.209S	Burn of second degree of unspecified site of unspecified lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.21	Burn of second degree of thigh	Diagnosis	ICD-10-CM
T24.211	Burn of second degree of right thigh	Diagnosis	ICD-10-CM
T24.211A	Burn of second degree of right thigh, initial encounter	Diagnosis	ICD-10-CM
T24.211D	Burn of second degree of right thigh, subsequent encounter	Diagnosis	ICD-10-CM
T24.211S	Burn of second degree of right thigh, sequela	Diagnosis	ICD-10-CM
T24.212	Burn of second degree of left thigh	Diagnosis	ICD-10-CM
T24.212A	Burn of second degree of left thigh, initial encounter	Diagnosis	ICD-10-CM
T24.212D	Burn of second degree of left thigh, subsequent encounter	Diagnosis	ICD-10-CM
T24.212S	Burn of second degree of left thigh, sequela	Diagnosis	ICD-10-CM
T24.219	Burn of second degree of unspecified thigh	Diagnosis	ICD-10-CM
T24.219A	Burn of second degree of unspecified thigh, initial encounter	Diagnosis	ICD-10-CM
T24.219D	Burn of second degree of unspecified thigh, subsequent encounter	Diagnosis	ICD-10-CM
T24.219S	Burn of second degree of unspecified thigh, sequela	Diagnosis	ICD-10-CM
T24.22	Burn of second degree of knee	Diagnosis	ICD-10-CM
T24.221	Burn of second degree of right knee	Diagnosis	ICD-10-CM
T24.221A	Burn of second degree of right knee, initial encounter	Diagnosis	ICD-10-CM
T24.221D	Burn of second degree of right knee, subsequent encounter	Diagnosis	ICD-10-CM
T24.221S	Burn of second degree of right knee, sequela	Diagnosis	ICD-10-CM
T24.222	Burn of second degree of left knee	Diagnosis	ICD-10-CM
T24.222A	Burn of second degree of left knee, initial encounter	Diagnosis	ICD-10-CM
T24.222D	Burn of second degree of left knee, subsequent encounter	Diagnosis	ICD-10-CM
T24.222S	Burn of second degree of left knee, sequela	Diagnosis	ICD-10-CM
T24.229	Burn of second degree of unspecified knee	Diagnosis	ICD-10-CM
T24.229A	Burn of second degree of unspecified knee, initial encounter	Diagnosis	ICD-10-CM
T24.229D	Burn of second degree of unspecified knee, subsequent encounter	Diagnosis	ICD-10-CM
T24.229S	Burn of second degree of unspecified knee, sequela	Diagnosis	ICD-10-CM
T24.23	Burn of second degree of lower leg	Diagnosis	ICD-10-CM
T24.231	Burn of second degree of right lower leg	Diagnosis	ICD-10-CM
T24.231A	Burn of second degree of right lower leg, initial encounter	Diagnosis	ICD-10-CM
T24.231D	Burn of second degree of right lower leg, subsequent encounter	Diagnosis	ICD-10-CM
T24.231S	Burn of second degree of right lower leg, sequela	Diagnosis	ICD-10-CM
T24.232	Burn of second degree of left lower leg	Diagnosis	ICD-10-CM
T24.232A	Burn of second degree of left lower leg, initial encounter	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T24.232D	Burn of second degree of left lower leg, subsequent encounter	Diagnosis	ICD-10-CM
T24.232S	Burn of second degree of left lower leg, sequela	Diagnosis	ICD-10-CM
T24.239	Burn of second degree of unspecified lower leg	Diagnosis	ICD-10-CM
T24.239A	Burn of second degree of unspecified lower leg, initial encounter	Diagnosis	ICD-10-CM
T24.239D	Burn of second degree of unspecified lower leg, subsequent encounter	Diagnosis	ICD-10-CM
T24.239S	Burn of second degree of unspecified lower leg, sequela	Diagnosis	ICD-10-CM
T24.29	Burn of second degree of multiple sites of lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.291	Burn of second degree of multiple sites of right lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.291A	Burn of second degree of multiple sites of right lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.291D	Burn of second degree of multiple sites of right lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.291S	Burn of second degree of multiple sites of right lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.292	Burn of second degree of multiple sites of left lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.292A	Burn of second degree of multiple sites of left lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.292D	Burn of second degree of multiple sites of left lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.292S	Burn of second degree of multiple sites of left lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.299	Burn of second degree of multiple sites of unspecified lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.299A	Burn of second degree of multiple sites of unspecified lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.299D	Burn of second degree of multiple sites of unspecified lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.299S	Burn of second degree of multiple sites of unspecified lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.3	Burn of third degree of lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.30	Burn of third degree of unspecified site of lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.301	Burn of third degree of unspecified site of right lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.301A	Burn of third degree of unspecified site of right lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.301D	Burn of third degree of unspecified site of right lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.301S	Burn of third degree of unspecified site of right lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.302	Burn of third degree of unspecified site of left lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.302A	Burn of third degree of unspecified site of left lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.302D	Burn of third degree of unspecified site of left lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.302S	Burn of third degree of unspecified site of left lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T24.309	Burn of third degree of unspecified site of unspecified lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.309A	Burn of third degree of unspecified site of unspecified lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.309D	Burn of third degree of unspecified site of unspecified lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.309S	Burn of third degree of unspecified site of unspecified lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.31	Burn of third degree of thigh	Diagnosis	ICD-10-CM
T24.311	Burn of third degree of right thigh	Diagnosis	ICD-10-CM
T24.311A	Burn of third degree of right thigh, initial encounter	Diagnosis	ICD-10-CM
T24.311D	Burn of third degree of right thigh, subsequent encounter	Diagnosis	ICD-10-CM
T24.311S	Burn of third degree of right thigh, sequela	Diagnosis	ICD-10-CM
T24.312	Burn of third degree of left thigh	Diagnosis	ICD-10-CM
T24.312A	Burn of third degree of left thigh, initial encounter	Diagnosis	ICD-10-CM
T24.312D	Burn of third degree of left thigh, subsequent encounter	Diagnosis	ICD-10-CM
T24.312S	Burn of third degree of left thigh, sequela	Diagnosis	ICD-10-CM
T24.319	Burn of third degree of unspecified thigh	Diagnosis	ICD-10-CM
T24.319A	Burn of third degree of unspecified thigh, initial encounter	Diagnosis	ICD-10-CM
T24.319D	Burn of third degree of unspecified thigh, subsequent encounter	Diagnosis	ICD-10-CM
T24.319S	Burn of third degree of unspecified thigh, sequela	Diagnosis	ICD-10-CM
T24.32	Burn of third degree of knee	Diagnosis	ICD-10-CM
T24.321	Burn of third degree of right knee	Diagnosis	ICD-10-CM
T24.321A	Burn of third degree of right knee, initial encounter	Diagnosis	ICD-10-CM
T24.321D	Burn of third degree of right knee, subsequent encounter	Diagnosis	ICD-10-CM
T24.321S	Burn of third degree of right knee, sequela	Diagnosis	ICD-10-CM
T24.322	Burn of third degree of left knee	Diagnosis	ICD-10-CM
T24.322A	Burn of third degree of left knee, initial encounter	Diagnosis	ICD-10-CM
T24.322D	Burn of third degree of left knee, subsequent encounter	Diagnosis	ICD-10-CM
T24.322S	Burn of third degree of left knee, sequela	Diagnosis	ICD-10-CM
T24.329	Burn of third degree of unspecified knee	Diagnosis	ICD-10-CM
T24.329A	Burn of third degree of unspecified knee, initial encounter	Diagnosis	ICD-10-CM
T24.329D	Burn of third degree of unspecified knee, subsequent encounter	Diagnosis	ICD-10-CM
T24.329S	Burn of third degree of unspecified knee, sequela	Diagnosis	ICD-10-CM
T24.33	Burn of third degree of lower leg	Diagnosis	ICD-10-CM
T24.331	Burn of third degree of right lower leg	Diagnosis	ICD-10-CM
T24.331A	Burn of third degree of right lower leg, initial encounter	Diagnosis	ICD-10-CM
T24.331D	Burn of third degree of right lower leg, subsequent encounter	Diagnosis	ICD-10-CM
T24.331S	Burn of third degree of right lower leg, sequela	Diagnosis	ICD-10-CM
T24.332	Burn of third degree of left lower leg	Diagnosis	ICD-10-CM
T24.332A	Burn of third degree of left lower leg, initial encounter	Diagnosis	ICD-10-CM
T24.332D	Burn of third degree of left lower leg, subsequent encounter	Diagnosis	ICD-10-CM
T24.332S	Burn of third degree of left lower leg, sequela	Diagnosis	ICD-10-CM
T24.339	Burn of third degree of unspecified lower leg	Diagnosis	ICD-10-CM
T24.339A	Burn of third degree of unspecified lower leg, initial encounter	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T24.339D	Burn of third degree of unspecified lower leg, subsequent encounter	Diagnosis	ICD-10-CM
T24.339S	Burn of third degree of unspecified lower leg, sequela	Diagnosis	ICD-10-CM
T24.39	Burn of third degree of multiple sites of lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.391	Burn of third degree of multiple sites of right lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.391A	Burn of third degree of multiple sites of right lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.391D	Burn of third degree of multiple sites of right lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.391S	Burn of third degree of multiple sites of right lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.392	Burn of third degree of multiple sites of left lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.392A	Burn of third degree of multiple sites of left lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.392D	Burn of third degree of multiple sites of left lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.392S	Burn of third degree of multiple sites of left lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T24.399	Burn of third degree of multiple sites of unspecified lower limb, except ankle and foot	Diagnosis	ICD-10-CM
T24.399A	Burn of third degree of multiple sites of unspecified lower limb, except ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T24.399D	Burn of third degree of multiple sites of unspecified lower limb, except ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T24.399S	Burn of third degree of multiple sites of unspecified lower limb, except ankle and foot, sequela	Diagnosis	ICD-10-CM
T25	Burn and corrosion of ankle and foot	Diagnosis	ICD-10-CM
T25.0	Burn of unspecified degree of ankle and foot	Diagnosis	ICD-10-CM
T25.01	Burn of unspecified degree of ankle	Diagnosis	ICD-10-CM
T25.011	Burn of unspecified degree of right ankle	Diagnosis	ICD-10-CM
T25.011A	Burn of unspecified degree of right ankle, initial encounter	Diagnosis	ICD-10-CM
T25.011D	Burn of unspecified degree of right ankle, subsequent encounter	Diagnosis	ICD-10-CM
T25.011S	Burn of unspecified degree of right ankle, sequela	Diagnosis	ICD-10-CM
T25.012	Burn of unspecified degree of left ankle	Diagnosis	ICD-10-CM
T25.012A	Burn of unspecified degree of left ankle, initial encounter	Diagnosis	ICD-10-CM
T25.012D	Burn of unspecified degree of left ankle, subsequent encounter	Diagnosis	ICD-10-CM
T25.012S	Burn of unspecified degree of left ankle, sequela	Diagnosis	ICD-10-CM
T25.019	Burn of unspecified degree of unspecified ankle	Diagnosis	ICD-10-CM
T25.019A	Burn of unspecified degree of unspecified ankle, initial encounter	Diagnosis	ICD-10-CM
T25.019D	Burn of unspecified degree of unspecified ankle, subsequent encounter	Diagnosis	ICD-10-CM
T25.019S	Burn of unspecified degree of unspecified ankle, sequela	Diagnosis	ICD-10-CM
T25.02	Burn of unspecified degree of foot	Diagnosis	ICD-10-CM
T25.021	Burn of unspecified degree of right foot	Diagnosis	ICD-10-CM
T25.021A	Burn of unspecified degree of right foot, initial encounter	Diagnosis	ICD-10-CM
T25.021D	Burn of unspecified degree of right foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.021S	Burn of unspecified degree of right foot, sequela	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T25.022	Burn of unspecified degree of left foot	Diagnosis	ICD-10-CM
T25.022A	Burn of unspecified degree of left foot, initial encounter	Diagnosis	ICD-10-CM
T25.022D	Burn of unspecified degree of left foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.022S	Burn of unspecified degree of left foot, sequela	Diagnosis	ICD-10-CM
T25.029	Burn of unspecified degree of unspecified foot	Diagnosis	ICD-10-CM
T25.029A	Burn of unspecified degree of unspecified foot, initial encounter	Diagnosis	ICD-10-CM
T25.029D	Burn of unspecified degree of unspecified foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.029S	Burn of unspecified degree of unspecified foot, sequela	Diagnosis	ICD-10-CM
T25.03	Burn of unspecified degree of toe(s) (nail)	Diagnosis	ICD-10-CM
T25.031	Burn of unspecified degree of right toe(s) (nail)	Diagnosis	ICD-10-CM
T25.031A	Burn of unspecified degree of right toe(s) (nail), initial encounter	Diagnosis	ICD-10-CM
T25.031D	Burn of unspecified degree of right toe(s) (nail), subsequent encounter	Diagnosis	ICD-10-CM
T25.031S	Burn of unspecified degree of right toe(s) (nail), sequela	Diagnosis	ICD-10-CM
T25.032	Burn of unspecified degree of left toe(s) (nail)	Diagnosis	ICD-10-CM
T25.032A	Burn of unspecified degree of left toe(s) (nail), initial encounter	Diagnosis	ICD-10-CM
T25.032D	Burn of unspecified degree of left toe(s) (nail), subsequent encounter	Diagnosis	ICD-10-CM
T25.032S	Burn of unspecified degree of left toe(s) (nail), sequela	Diagnosis	ICD-10-CM
T25.039	Burn of unspecified degree of unspecified toe(s) (nail)	Diagnosis	ICD-10-CM
T25.039A	Burn of unspecified degree of unspecified toe(s) (nail), initial encounter	Diagnosis	ICD-10-CM
T25.039D	Burn of unspecified degree of unspecified toe(s) (nail), subsequent encounter	Diagnosis	ICD-10-CM
T25.039S	Burn of unspecified degree of unspecified toe(s) (nail), sequela	Diagnosis	ICD-10-CM
T25.09	Burn of unspecified degree of multiple sites of ankle and foot	Diagnosis	ICD-10-CM
T25.091	Burn of unspecified degree of multiple sites of right ankle and foot	Diagnosis	ICD-10-CM
T25.091A	Burn of unspecified degree of multiple sites of right ankle and foot, initial	Diagnosis	ICD-10-CM
T25.091D	Burn of unspecified degree of multiple sites of right ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.091S	Burn of unspecified degree of multiple sites of right ankle and foot, sequela	Diagnosis	ICD-10-CM
T25.092	Burn of unspecified degree of multiple sites of left ankle and foot	Diagnosis	ICD-10-CM
T25.092A	Burn of unspecified degree of multiple sites of left ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T25.092D	Burn of unspecified degree of multiple sites of left ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.092S	Burn of unspecified degree of multiple sites of left ankle and foot, sequela	Diagnosis	ICD-10-CM
T25.099	Burn of unspecified degree of multiple sites of unspecified ankle and foot	Diagnosis	ICD-10-CM
T25.099A	Burn of unspecified degree of multiple sites of unspecified ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T25.099D	Burn of unspecified degree of multiple sites of unspecified ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.099S	Burn of unspecified degree of multiple sites of unspecified ankle and foot, sequela	Diagnosis	ICD-10-CM
T25.1	Burn of first degree of ankle and foot	Diagnosis	ICD-10-CM
T25.11	Burn of first degree of ankle	Diagnosis	ICD-10-CM
T25.111	Burn of first degree of right ankle	Diagnosis	ICD-10-CM
T25.111A	Burn of first degree of right ankle, initial encounter	Diagnosis	ICD-10-CM
T25.111D	Burn of first degree of right ankle, subsequent encounter	Diagnosis	ICD-10-CM
T25.111S	Burn of first degree of right ankle, sequela	Diagnosis	ICD-10-CM
T25.112	Burn of first degree of left ankle	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T25.112A	Burn of first degree of left ankle, initial encounter	Diagnosis	ICD-10-CM
T25.112D	Burn of first degree of left ankle, subsequent encounter	Diagnosis	ICD-10-CM
T25.112S	Burn of first degree of left ankle, sequela	Diagnosis	ICD-10-CM
T25.119	Burn of first degree of unspecified ankle	Diagnosis	ICD-10-CM
T25.119A	Burn of first degree of unspecified ankle, initial encounter	Diagnosis	ICD-10-CM
T25.119D	Burn of first degree of unspecified ankle, subsequent encounter	Diagnosis	ICD-10-CM
T25.119S	Burn of first degree of unspecified ankle, sequela	Diagnosis	ICD-10-CM
T25.12	Burn of first degree of foot	Diagnosis	ICD-10-CM
T25.121	Burn of first degree of right foot	Diagnosis	ICD-10-CM
T25.121A	Burn of first degree of right foot, initial encounter	Diagnosis	ICD-10-CM
T25.121D	Burn of first degree of right foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.121S	Burn of first degree of right foot, sequela	Diagnosis	ICD-10-CM
T25.122	Burn of first degree of left foot	Diagnosis	ICD-10-CM
T25.122A	Burn of first degree of left foot, initial encounter	Diagnosis	ICD-10-CM
T25.122D	Burn of first degree of left foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.122S	Burn of first degree of left foot, sequela	Diagnosis	ICD-10-CM
T25.129	Burn of first degree of unspecified foot	Diagnosis	ICD-10-CM
T25.129A	Burn of first degree of unspecified foot, initial encounter	Diagnosis	ICD-10-CM
T25.129D	Burn of first degree of unspecified foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.129S	Burn of first degree of unspecified foot, sequela	Diagnosis	ICD-10-CM
T25.13	Burn of first degree of toe(s) (nail)	Diagnosis	ICD-10-CM
T25.131	Burn of first degree of right toe(s) (nail)	Diagnosis	ICD-10-CM
T25.131A	Burn of first degree of right toe(s) (nail), initial encounter	Diagnosis	ICD-10-CM
T25.131D	Burn of first degree of right toe(s) (nail), subsequent encounter	Diagnosis	ICD-10-CM
T25.131S	Burn of first degree of right toe(s) (nail), sequela	Diagnosis	ICD-10-CM
T25.132	Burn of first degree of left toe(s) (nail)	Diagnosis	ICD-10-CM
T25.132A	Burn of first degree of left toe(s) (nail), initial encounter	Diagnosis	ICD-10-CM
T25.132D	Burn of first degree of left toe(s) (nail), subsequent encounter	Diagnosis	ICD-10-CM
T25.132S	Burn of first degree of left toe(s) (nail), sequela	Diagnosis	ICD-10-CM
T25.139	Burn of first degree of unspecified toe(s) (nail)	Diagnosis	ICD-10-CM
T25.139A	Burn of first degree of unspecified toe(s) (nail), initial encounter	Diagnosis	ICD-10-CM
T25.139D	Burn of first degree of unspecified toe(s) (nail), subsequent encounter	Diagnosis	ICD-10-CM
T25.139S	Burn of first degree of unspecified toe(s) (nail), sequela	Diagnosis	ICD-10-CM
T25.19	Burn of first degree of multiple sites of ankle and foot	Diagnosis	ICD-10-CM
T25.191	Burn of first degree of multiple sites of right ankle and foot	Diagnosis	ICD-10-CM
T25.191A	Burn of first degree of multiple sites of right ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T25.191D	Burn of first degree of multiple sites of right ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.191S	Burn of first degree of multiple sites of right ankle and foot, sequela	Diagnosis	ICD-10-CM
T25.192	Burn of first degree of multiple sites of left ankle and foot	Diagnosis	ICD-10-CM
T25.192A	Burn of first degree of multiple sites of left ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T25.192D	Burn of first degree of multiple sites of left ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.192S	Burn of first degree of multiple sites of left ankle and foot, sequela	Diagnosis	ICD-10-CM
T25.199	Burn of first degree of multiple sites of unspecified ankle and foot	Diagnosis	ICD-10-CM
T25.199A	Burn of first degree of multiple sites of unspecified ankle and foot, initial encounter	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T25.199D	Burn of first degree of multiple sites of unspecified ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.199S	Burn of first degree of multiple sites of unspecified ankle and foot, sequela	Diagnosis	ICD-10-CM
T25.2	Burn of second degree of ankle and foot	Diagnosis	ICD-10-CM
T25.21	Burn of second degree of ankle	Diagnosis	ICD-10-CM
T25.211	Burn of second degree of right ankle	Diagnosis	ICD-10-CM
T25.211A	Burn of second degree of right ankle, initial encounter	Diagnosis	ICD-10-CM
T25.211D	Burn of second degree of right ankle, subsequent encounter	Diagnosis	ICD-10-CM
T25.211S	Burn of second degree of right ankle, sequela	Diagnosis	ICD-10-CM
T25.212	Burn of second degree of left ankle	Diagnosis	ICD-10-CM
T25.212A	Burn of second degree of left ankle, initial encounter	Diagnosis	ICD-10-CM
T25.212D	Burn of second degree of left ankle, subsequent encounter	Diagnosis	ICD-10-CM
T25.212S	Burn of second degree of left ankle, sequela	Diagnosis	ICD-10-CM
T25.219	Burn of second degree of unspecified ankle	Diagnosis	ICD-10-CM
T25.219A	Burn of second degree of unspecified ankle, initial encounter	Diagnosis	ICD-10-CM
T25.219D	Burn of second degree of unspecified ankle, subsequent encounter	Diagnosis	ICD-10-CM
T25.219S	Burn of second degree of unspecified ankle, sequela	Diagnosis	ICD-10-CM
T25.22	Burn of second degree of foot	Diagnosis	ICD-10-CM
T25.221	Burn of second degree of right foot	Diagnosis	ICD-10-CM
T25.221A	Burn of second degree of right foot, initial encounter	Diagnosis	ICD-10-CM
T25.221D	Burn of second degree of right foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.221S	Burn of second degree of right foot, sequela	Diagnosis	ICD-10-CM
T25.222	Burn of second degree of left foot	Diagnosis	ICD-10-CM
T25.222A	Burn of second degree of left foot, initial encounter	Diagnosis	ICD-10-CM
T25.222D	Burn of second degree of left foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.222S	Burn of second degree of left foot, sequela	Diagnosis	ICD-10-CM
T25.229	Burn of second degree of unspecified foot	Diagnosis	ICD-10-CM
T25.229A	Burn of second degree of unspecified foot, initial encounter	Diagnosis	ICD-10-CM
T25.229D	Burn of second degree of unspecified foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.229S	Burn of second degree of unspecified foot, sequela	Diagnosis	ICD-10-CM
T25.23	Burn of second degree of toe(s) (nail)	Diagnosis	ICD-10-CM
T25.231	Burn of second degree of right toe(s) (nail)	Diagnosis	ICD-10-CM
T25.231A	Burn of second degree of right toe(s) (nail), initial encounter	Diagnosis	ICD-10-CM
T25.231D	Burn of second degree of right toe(s) (nail), subsequent encounter	Diagnosis	ICD-10-CM
T25.231S	Burn of second degree of right toe(s) (nail), sequela	Diagnosis	ICD-10-CM
T25.232	Burn of second degree of left toe(s) (nail)	Diagnosis	ICD-10-CM
T25.232A	Burn of second degree of left toe(s) (nail), initial encounter	Diagnosis	ICD-10-CM
T25.232D	Burn of second degree of left toe(s) (nail), subsequent encounter	Diagnosis	ICD-10-CM
T25.232S	Burn of second degree of left toe(s) (nail), sequela	Diagnosis	ICD-10-CM
T25.239	Burn of second degree of unspecified toe(s) (nail)	Diagnosis	ICD-10-CM
T25.239A	Burn of second degree of unspecified toe(s) (nail), initial encounter	Diagnosis	ICD-10-CM
T25.239D	Burn of second degree of unspecified toe(s) (nail), subsequent encounter	Diagnosis	ICD-10-CM
T25.239S	Burn of second degree of unspecified toe(s) (nail), sequela	Diagnosis	ICD-10-CM
T25.29	Burn of second degree of multiple sites of ankle and foot	Diagnosis	ICD-10-CM
T25.291	Burn of second degree of multiple sites of right ankle and foot	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
T25.291A	Burn of second degree of multiple sites of right ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T25.291D	Burn of second degree of multiple sites of right ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.291S	Burn of second degree of multiple sites of right ankle and foot, sequela	Diagnosis	ICD-10-CM
T25.292	Burn of second degree of multiple sites of left ankle and foot	Diagnosis	ICD-10-CM
T25.292A	Burn of second degree of multiple sites of left ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T25.292D	Burn of second degree of multiple sites of left ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.292S	Burn of second degree of multiple sites of left ankle and foot, sequela	Diagnosis	ICD-10-CM
T25.299	Burn of second degree of multiple sites of unspecified ankle and foot	Diagnosis	ICD-10-CM
T25.299A	Burn of second degree of multiple sites of unspecified ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T25.299D	Burn of second degree of multiple sites of unspecified ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.299S	Burn of second degree of multiple sites of unspecified ankle and foot, sequela	Diagnosis	ICD-10-CM
T25.3	Burn of third degree of ankle and foot	Diagnosis	ICD-10-CM
T25.31	Burn of third degree of ankle	Diagnosis	ICD-10-CM
T25.311	Burn of third degree of right ankle	Diagnosis	ICD-10-CM
T25.311A	Burn of third degree of right ankle, initial encounter	Diagnosis	ICD-10-CM
T25.311D	Burn of third degree of right ankle, subsequent encounter	Diagnosis	ICD-10-CM
T25.311S	Burn of third degree of right ankle, sequela	Diagnosis	ICD-10-CM
T25.312	Burn of third degree of left ankle	Diagnosis	ICD-10-CM
T25.312A	Burn of third degree of left ankle, initial encounter	Diagnosis	ICD-10-CM
T25.312D	Burn of third degree of left ankle, subsequent encounter	Diagnosis	ICD-10-CM
T25.312S	Burn of third degree of left ankle, sequela	Diagnosis	ICD-10-CM
T25.319	Burn of third degree of unspecified ankle	Diagnosis	ICD-10-CM
T25.319A	Burn of third degree of unspecified ankle, initial encounter	Diagnosis	ICD-10-CM
T25.319D	Burn of third degree of unspecified ankle, subsequent encounter	Diagnosis	ICD-10-CM
T25.319S	Burn of third degree of unspecified ankle, sequela	Diagnosis	ICD-10-CM
T25.32	Burn of third degree of foot	Diagnosis	ICD-10-CM
T25.321	Burn of third degree of right foot	Diagnosis	ICD-10-CM
T25.321A	Burn of third degree of right foot, initial encounter	Diagnosis	ICD-10-CM
T25.321D	Burn of third degree of right foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.321S	Burn of third degree of right foot, sequela	Diagnosis	ICD-10-CM
T25.322	Burn of third degree of left foot	Diagnosis	ICD-10-CM
T25.322A	Burn of third degree of left foot, initial encounter	Diagnosis	ICD-10-CM
T25.322D	Burn of third degree of left foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.322S	Burn of third degree of left foot, sequela	Diagnosis	ICD-10-CM
T25.329	Burn of third degree of unspecified foot	Diagnosis	ICD-10-CM
T25.329A	Burn of third degree of unspecified foot, initial encounter	Diagnosis	ICD-10-CM
T25.329D	Burn of third degree of unspecified foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.329S	Burn of third degree of unspecified foot, sequela	Diagnosis	ICD-10-CM
T25.33	Burn of third degree of toe(s) (nail)	Diagnosis	ICD-10-CM
T25.331	Burn of third degree of right toe(s) (nail)	Diagnosis	ICD-10-CM
T25.331A	Burn of third degree of right toe(s) (nail), initial encounter	Diagnosis	ICD-10-CM
T25.331D	Burn of third degree of right toe(s) (nail), subsequent encounter	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T25.331S	Burn of third degree of right toe(s) (nail), sequela	Diagnosis	ICD-10-CM
T25.332	Burn of third degree of left toe(s) (nail)	Diagnosis	ICD-10-CM
T25.332A	Burn of third degree of left toe(s) (nail), initial encounter	Diagnosis	ICD-10-CM
T25.332D	Burn of third degree of left toe(s) (nail), subsequent encounter	Diagnosis	ICD-10-CM
T25.332S	Burn of third degree of left toe(s) (nail), sequela	Diagnosis	ICD-10-CM
T25.339	Burn of third degree of unspecified toe(s) (nail)	Diagnosis	ICD-10-CM
T25.339A	Burn of third degree of unspecified toe(s) (nail), initial encounter	Diagnosis	ICD-10-CM
T25.339D	Burn of third degree of unspecified toe(s) (nail), subsequent encounter	Diagnosis	ICD-10-CM
T25.339S	Burn of third degree of unspecified toe(s) (nail), sequela	Diagnosis	ICD-10-CM
T25.39	Burn of third degree of multiple sites of ankle and foot	Diagnosis	ICD-10-CM
T25.391	Burn of third degree of multiple sites of right ankle and foot	Diagnosis	ICD-10-CM
T25.391A	Burn of third degree of multiple sites of right ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T25.391D	Burn of third degree of multiple sites of right ankle and foot, subsequent	Diagnosis	ICD-10-CM
T25.391S	Burn of third degree of multiple sites of right ankle and foot, sequela	Diagnosis	ICD-10-CM
T25.392	Burn of third degree of multiple sites of left ankle and foot	Diagnosis	ICD-10-CM
T25.392A	Burn of third degree of multiple sites of left ankle and foot, initial encounter	Diagnosis	ICD-10-CM
T25.392D	Burn of third degree of multiple sites of left ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.392S	Burn of third degree of multiple sites of left ankle and foot, sequela	Diagnosis	ICD-10-CM
T25.399	Burn of third degree of multiple sites of unspecified ankle and foot	Diagnosis	ICD-10-CM
T25.399A	Burn of third degree of multiple sites of unspecified ankle and foot, initial	Diagnosis	ICD-10-CM
T25.399D	Burn of third degree of multiple sites of unspecified ankle and foot, subsequent encounter	Diagnosis	ICD-10-CM
T25.399S	Burn of third degree of multiple sites of unspecified ankle and foot, sequela	Diagnosis	ICD-10-CM
T26	Burn and corrosion confined to eye and adnexa	Diagnosis	ICD-10-CM
T26.0	Burn of eyelid and periocular area	Diagnosis	ICD-10-CM
T26.00	Burn of unspecified eyelid and periocular area	Diagnosis	ICD-10-CM
T26.00XA	Burn of unspecified eyelid and periocular area, initial encounter	Diagnosis	ICD-10-CM
T26.00XD	Burn of unspecified eyelid and periocular area, subsequent encounter	Diagnosis	ICD-10-CM
T26.00XS	Burn of unspecified eyelid and periocular area, sequela	Diagnosis	ICD-10-CM
T26.01	Burn of right eyelid and periocular area	Diagnosis	ICD-10-CM
T26.01XA	Burn of right eyelid and periocular area, initial encounter	Diagnosis	ICD-10-CM
T26.01XD	Burn of right eyelid and periocular area, subsequent encounter	Diagnosis	ICD-10-CM
T26.01XS	Burn of right eyelid and periocular area, sequela	Diagnosis	ICD-10-CM
T26.02	Burn of left eyelid and periocular area	Diagnosis	ICD-10-CM
T26.02XA	Burn of left eyelid and periocular area, initial encounter	Diagnosis	ICD-10-CM
T26.02XD	Burn of left eyelid and periocular area, subsequent encounter	Diagnosis	ICD-10-CM
T26.02XS	Burn of left eyelid and periocular area, sequela	Diagnosis	ICD-10-CM
T26.1	Burn of cornea and conjunctival sac	Diagnosis	ICD-10-CM
T26.10	Burn of cornea and conjunctival sac, unspecified eye	Diagnosis	ICD-10-CM
T26.10XA	Burn of cornea and conjunctival sac, unspecified eye, initial encounter	Diagnosis	ICD-10-CM
T26.10XD	Burn of cornea and conjunctival sac, unspecified eye, subsequent encounter	Diagnosis	ICD-10-CM
T26.10XS	Burn of cornea and conjunctival sac, unspecified eye, sequela	Diagnosis	ICD-10-CM
T26.11	Burn of cornea and conjunctival sac, right eye	Diagnosis	ICD-10-CM
T26.11XA	Burn of cornea and conjunctival sac, right eye, initial encounter	Diagnosis	ICD-10-CM
T26.11XD	Burn of cornea and conjunctival sac, right eye, subsequent encounter	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T26.11XS	Burn of cornea and conjunctival sac, right eye, sequela	Diagnosis	ICD-10-CM
T26.12	Burn of cornea and conjunctival sac, left eye	Diagnosis	ICD-10-CM
T26.12XA	Burn of cornea and conjunctival sac, left eye, initial encounter	Diagnosis	ICD-10-CM
T26.12XD	Burn of cornea and conjunctival sac, left eye, subsequent encounter	Diagnosis	ICD-10-CM
T26.12XS	Burn of cornea and conjunctival sac, left eye, sequela	Diagnosis	ICD-10-CM
T26.2	Burn with resulting rupture and destruction of eyeball	Diagnosis	ICD-10-CM
T26.20	Burn with resulting rupture and destruction of unspecified eyeball	Diagnosis	ICD-10-CM
T26.20XA	Burn with resulting rupture and destruction of unspecified eyeball, initial	Diagnosis	ICD-10-CM
T26.20XD	Burn with resulting rupture and destruction of unspecified eyeball, subsequent encounter	Diagnosis	ICD-10-CM
T26.20XS	Burn with resulting rupture and destruction of unspecified eyeball, sequela	Diagnosis	ICD-10-CM
T26.21	Burn with resulting rupture and destruction of right eyeball	Diagnosis	ICD-10-CM
T26.21XA	Burn with resulting rupture and destruction of right eyeball, initial encounter	Diagnosis	ICD-10-CM
T26.21XD	Burn with resulting rupture and destruction of right eyeball, subsequent encounter	Diagnosis	ICD-10-CM
T26.21XS	Burn with resulting rupture and destruction of right eyeball, sequela	Diagnosis	ICD-10-CM
T26.22	Burn with resulting rupture and destruction of left eyeball	Diagnosis	ICD-10-CM
T26.22XA	Burn with resulting rupture and destruction of left eyeball, initial encounter	Diagnosis	ICD-10-CM
T26.22XD	Burn with resulting rupture and destruction of left eyeball, subsequent encounter	Diagnosis	ICD-10-CM
T26.22XS	Burn with resulting rupture and destruction of left eyeball, sequela	Diagnosis	ICD-10-CM
T26.3	Burns of other specified parts of eye and adnexa	Diagnosis	ICD-10-CM
T26.30	Burns of other specified parts of unspecified eye and adnexa	Diagnosis	ICD-10-CM
T26.30XA	Burns of other specified parts of unspecified eye and adnexa, initial encounter	Diagnosis	ICD-10-CM
T26.30XD	Burns of other specified parts of unspecified eye and adnexa, subsequent	Diagnosis	ICD-10-CM
T26.30XS	Burns of other specified parts of unspecified eye and adnexa, sequela	Diagnosis	ICD-10-CM
T26.31	Burns of other specified parts of right eye and adnexa	Diagnosis	ICD-10-CM
T26.31XA	Burns of other specified parts of right eye and adnexa, initial encounter	Diagnosis	ICD-10-CM
T26.31XD	Burns of other specified parts of right eye and adnexa, subsequent encounter	Diagnosis	ICD-10-CM
T26.31XS	Burns of other specified parts of right eye and adnexa, sequela	Diagnosis	ICD-10-CM
T26.32	Burns of other specified parts of left eye and adnexa	Diagnosis	ICD-10-CM
T26.32XA	Burns of other specified parts of left eye and adnexa, initial encounter	Diagnosis	ICD-10-CM
T26.32XD	Burns of other specified parts of left eye and adnexa, subsequent encounter	Diagnosis	ICD-10-CM
T26.32XS	Burns of other specified parts of left eye and adnexa, sequela	Diagnosis	ICD-10-CM
T26.4	Burn of eye and adnexa, part unspecified	Diagnosis	ICD-10-CM
T26.40	Burn of unspecified eye and adnexa, part unspecified	Diagnosis	ICD-10-CM
T26.40XA	Burn of unspecified eye and adnexa, part unspecified, initial encounter	Diagnosis	ICD-10-CM
T26.40XD	Burn of unspecified eye and adnexa, part unspecified, subsequent encounter	Diagnosis	ICD-10-CM
T26.40XS	Burn of unspecified eye and adnexa, part unspecified, sequela	Diagnosis	ICD-10-CM
T26.41	Burn of right eye and adnexa, part unspecified	Diagnosis	ICD-10-CM
T26.41XA	Burn of right eye and adnexa, part unspecified, initial encounter	Diagnosis	ICD-10-CM
T26.41XD	Burn of right eye and adnexa, part unspecified, subsequent encounter	Diagnosis	ICD-10-CM
T26.41XS	Burn of right eye and adnexa, part unspecified, sequela	Diagnosis	ICD-10-CM
T26.42	Burn of left eye and adnexa, part unspecified	Diagnosis	ICD-10-CM
T26.42XA	Burn of left eye and adnexa, part unspecified, initial encounter	Diagnosis	ICD-10-CM
T26.42XD	Burn of left eye and adnexa, part unspecified, subsequent encounter	Diagnosis	ICD-10-CM
T26.42XS	Burn of left eye and adnexa, part unspecified, sequela	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T27	Burn and corrosion of respiratory tract	Diagnosis	ICD-10-CM
T27.0	Burn of larynx and trachea	Diagnosis	ICD-10-CM
T27.0XXA	Burn of larynx and trachea, initial encounter	Diagnosis	ICD-10-CM
T27.0XXD	Burn of larynx and trachea, subsequent encounter	Diagnosis	ICD-10-CM
T27.0XXS	Burn of larynx and trachea, sequela	Diagnosis	ICD-10-CM
T27.1	Burn involving larynx and trachea with lung	Diagnosis	ICD-10-CM
T27.1XXA	Burn involving larynx and trachea with lung, initial encounter	Diagnosis	ICD-10-CM
T27.1XXD	Burn involving larynx and trachea with lung, subsequent encounter	Diagnosis	ICD-10-CM
T27.1XXS	Burn involving larynx and trachea with lung, sequela	Diagnosis	ICD-10-CM
T27.2	Burn of other parts of respiratory tract	Diagnosis	ICD-10-CM
T27.2XXA	Burn of other parts of respiratory tract, initial encounter	Diagnosis	ICD-10-CM
T27.2XXD	Burn of other parts of respiratory tract, subsequent encounter	Diagnosis	ICD-10-CM
T27.2XXS	Burn of other parts of respiratory tract, sequela	Diagnosis	ICD-10-CM
T27.3	Burn of respiratory tract, part unspecified	Diagnosis	ICD-10-CM
T27.3XXA	Burn of respiratory tract, part unspecified, initial encounter	Diagnosis	ICD-10-CM
T27.3XXD	Burn of respiratory tract, part unspecified, subsequent encounter	Diagnosis	ICD-10-CM
T27.3XXS	Burn of respiratory tract, part unspecified, sequela	Diagnosis	ICD-10-CM
T28	Burn and corrosion of other internal organs	Diagnosis	ICD-10-CM
T28.0	Burn of mouth and pharynx	Diagnosis	ICD-10-CM
T28.0XXA	Burn of mouth and pharynx, initial encounter	Diagnosis	ICD-10-CM
T28.0XXD	Burn of mouth and pharynx, subsequent encounter	Diagnosis	ICD-10-CM
T28.0XXS	Burn of mouth and pharynx, sequela	Diagnosis	ICD-10-CM
T28.1	Burn of esophagus	Diagnosis	ICD-10-CM
T28.1XXA	Burn of esophagus, initial encounter	Diagnosis	ICD-10-CM
T28.1XXD	Burn of esophagus, subsequent encounter	Diagnosis	ICD-10-CM
T28.1XXS	Burn of esophagus, sequela	Diagnosis	ICD-10-CM
T28.2	Burn of other parts of alimentary tract	Diagnosis	ICD-10-CM
T28.2XXA	Burn of other parts of alimentary tract, initial encounter	Diagnosis	ICD-10-CM
T28.2XXD	Burn of other parts of alimentary tract, subsequent encounter	Diagnosis	ICD-10-CM
T28.2XXS	Burn of other parts of alimentary tract, sequela	Diagnosis	ICD-10-CM
T28.3	Burn of internal genitourinary organs	Diagnosis	ICD-10-CM
T28.3XXA	Burn of internal genitourinary organs, initial encounter	Diagnosis	ICD-10-CM
T28.3XXD	Burn of internal genitourinary organs, subsequent encounter	Diagnosis	ICD-10-CM
T28.3XXS	Burn of internal genitourinary organs, sequela	Diagnosis	ICD-10-CM
T28.4	Burns of other and unspecified internal organs	Diagnosis	ICD-10-CM
T28.40	Burn of unspecified internal organ	Diagnosis	ICD-10-CM
T28.40XA	Burn of unspecified internal organ, initial encounter	Diagnosis	ICD-10-CM
T28.40XD	Burn of unspecified internal organ, subsequent encounter	Diagnosis	ICD-10-CM
T28.40XS	Burn of unspecified internal organ, sequela	Diagnosis	ICD-10-CM
T28.41	Burn of ear drum	Diagnosis	ICD-10-CM
T28.411	Burn of right ear drum	Diagnosis	ICD-10-CM
T28.411A	Burn of right ear drum, initial encounter	Diagnosis	ICD-10-CM
T28.411D	Burn of right ear drum, subsequent encounter	Diagnosis	ICD-10-CM
T28.411S	Burn of right ear drum, sequela	Diagnosis	ICD-10-CM
T28.412	Burn of left ear drum	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T28.412A	Burn of left ear drum, initial encounter	Diagnosis	ICD-10-CM
T28.412D	Burn of left ear drum, subsequent encounter	Diagnosis	ICD-10-CM
T28.412S	Burn of left ear drum, sequela	Diagnosis	ICD-10-CM
T28.419	Burn of unspecified ear drum	Diagnosis	ICD-10-CM
T28.419A	Burn of unspecified ear drum, initial encounter	Diagnosis	ICD-10-CM
T28.419D	Burn of unspecified ear drum, subsequent encounter	Diagnosis	ICD-10-CM
T28.419S	Burn of unspecified ear drum, sequela	Diagnosis	ICD-10-CM
T28.49	Burn of other internal organ	Diagnosis	ICD-10-CM
T28.49XA	Burn of other internal organ, initial encounter	Diagnosis	ICD-10-CM
T28.49XD	Burn of other internal organ, subsequent encounter	Diagnosis	ICD-10-CM
T28.49XS	Burn of other internal organ, sequela	Diagnosis	ICD-10-CM
T30	Burn and corrosion, body region unspecified	Diagnosis	ICD-10-CM
T30.0	Burn of unspecified body region, unspecified degree	Diagnosis	ICD-10-CM
T31	Burns classified according to extent of body surface involved	Diagnosis	ICD-10-CM
T31.0	Burns involving less than 10% of body surface	Diagnosis	ICD-10-CM
T31.1	Burns involving 10-19% of body surface	Diagnosis	ICD-10-CM
T31.10	Burns involving 10-19% of body surface with 0% to 9% third degree burns	Diagnosis	ICD-10-CM
T31.11	Burns involving 10-19% of body surface with 10-19% third degree burns	Diagnosis	ICD-10-CM
T31.2	Burns involving 20-29% of body surface	Diagnosis	ICD-10-CM
T31.20	Burns involving 20-29% of body surface with 0% to 9% third degree burns	Diagnosis	ICD-10-CM
T31.21	Burns involving 20-29% of body surface with 10-19% third degree burns	Diagnosis	ICD-10-CM
T31.22	Burns involving 20-29% of body surface with 20-29% third degree burns	Diagnosis	ICD-10-CM
T31.3	Burns involving 30-39% of body surface	Diagnosis	ICD-10-CM
T31.30	Burns involving 30-39% of body surface with 0% to 9% third degree burns	Diagnosis	ICD-10-CM
T31.31	Burns involving 30-39% of body surface with 10-19% third degree burns	Diagnosis	ICD-10-CM
T31.32	Burns involving 30-39% of body surface with 20-29% third degree burns	Diagnosis	ICD-10-CM
T31.33	Burns involving 30-39% of body surface with 30-39% third degree burns	Diagnosis	ICD-10-CM
T31.4	Burns involving 40-49% of body surface	Diagnosis	ICD-10-CM
T31.40	Burns involving 40-49% of body surface with 0% to 9% third degree burns	Diagnosis	ICD-10-CM
T31.41	Burns involving 40-49% of body surface with 10-19% third degree burns	Diagnosis	ICD-10-CM
T31.42	Burns involving 40-49% of body surface with 20-29% third degree burns	Diagnosis	ICD-10-CM
T31.43	Burns involving 40-49% of body surface with 30-39% third degree burns	Diagnosis	ICD-10-CM
T31.44	Burns involving 40-49% of body surface with 40-49% third degree burns	Diagnosis	ICD-10-CM
T31.5	Burns involving 50-59% of body surface	Diagnosis	ICD-10-CM
T31.50	Burns involving 50-59% of body surface with 0% to 9% third degree burns	Diagnosis	ICD-10-CM
T31.51	Burns involving 50-59% of body surface with 10-19% third degree burns	Diagnosis	ICD-10-CM
T31.52	Burns involving 50-59% of body surface with 20-29% third degree burns	Diagnosis	ICD-10-CM
T31.53	Burns involving 50-59% of body surface with 30-39% third degree burns	Diagnosis	ICD-10-CM
T31.54	Burns involving 50-59% of body surface with 40-49% third degree burns	Diagnosis	ICD-10-CM
T31.55	Burns involving 50-59% of body surface with 50-59% third degree burns	Diagnosis	ICD-10-CM
T31.6	Burns involving 60-69% of body surface	Diagnosis	ICD-10-CM
T31.60	Burns involving 60-69% of body surface with 0% to 9% third degree burns	Diagnosis	ICD-10-CM
T31.61	Burns involving 60-69% of body surface with 10-19% third degree burns	Diagnosis	ICD-10-CM
T31.62	Burns involving 60-69% of body surface with 20-29% third degree burns	Diagnosis	ICD-10-CM
T31.63	Burns involving 60-69% of body surface with 30-39% third degree burns	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
T31.64	Burns involving 60-69% of body surface with 40-49% third degree burns	Diagnosis	ICD-10-CM
T31.65	Burns involving 60-69% of body surface with 50-59% third degree burns	Diagnosis	ICD-10-CM
T31.66	Burns involving 60-69% of body surface with 60-69% third degree burns	Diagnosis	ICD-10-CM
T31.7	Burns involving 70-79% of body surface	Diagnosis	ICD-10-CM
T31.70	Burns involving 70-79% of body surface with 0% to 9% third degree burns	Diagnosis	ICD-10-CM
T31.71	Burns involving 70-79% of body surface with 10-19% third degree burns	Diagnosis	ICD-10-CM
T31.72	Burns involving 70-79% of body surface with 20-29% third degree burns	Diagnosis	ICD-10-CM
T31.73	Burns involving 70-79% of body surface with 30-39% third degree burns	Diagnosis	ICD-10-CM
T31.74	Burns involving 70-79% of body surface with 40-49% third degree burns	Diagnosis	ICD-10-CM
T31.75	Burns involving 70-79% of body surface with 50-59% third degree burns	Diagnosis	ICD-10-CM
T31.76	Burns involving 70-79% of body surface with 60-69% third degree burns	Diagnosis	ICD-10-CM
T31.77	Burns involving 70-79% of body surface with 70-79% third degree burns	Diagnosis	ICD-10-CM
T31.8	Burns involving 80-89% of body surface	Diagnosis	ICD-10-CM
T31.80	Burns involving 80-89% of body surface with 0% to 9% third degree burns	Diagnosis	ICD-10-CM
T31.81	Burns involving 80-89% of body surface with 10-19% third degree burns	Diagnosis	ICD-10-CM
T31.82	Burns involving 80-89% of body surface with 20-29% third degree burns	Diagnosis	ICD-10-CM
T31.83	Burns involving 80-89% of body surface with 30-39% third degree burns	Diagnosis	ICD-10-CM
T31.84	Burns involving 80-89% of body surface with 40-49% third degree burns	Diagnosis	ICD-10-CM
T31.85	Burns involving 80-89% of body surface with 50-59% third degree burns	Diagnosis	ICD-10-CM
T31.86	Burns involving 80-89% of body surface with 60-69% third degree burns	Diagnosis	ICD-10-CM
T31.87	Burns involving 80-89% of body surface with 70-79% third degree burns	Diagnosis	ICD-10-CM
T31.88	Burns involving 80-89% of body surface with 80-89% third degree burns	Diagnosis	ICD-10-CM
T31.9	Burns involving 90% or more of body surface	Diagnosis	ICD-10-CM
T31.90	Burns involving 90% or more of body surface with 0% to 9% third degree burns	Diagnosis	ICD-10-CM
T31.91	Burns involving 90% or more of body surface with 10-19% third degree burns	Diagnosis	ICD-10-CM
T31.92	Burns involving 90% or more of body surface with 20-29% third degree burns	Diagnosis	ICD-10-CM
T31.93	Burns involving 90% or more of body surface with 30-39% third degree burns	Diagnosis	ICD-10-CM
T31.94	Burns involving 90% or more of body surface with 40-49% third degree burns	Diagnosis	ICD-10-CM
T31.95	Burns involving 90% or more of body surface with 50-59% third degree burns	Diagnosis	ICD-10-CM
T31.96	Burns involving 90% or more of body surface with 60-69% third degree burns	Diagnosis	ICD-10-CM
T31.97	Burns involving 90% or more of body surface with 70-79% third degree burns	Diagnosis	ICD-10-CM
T31.98	Burns involving 90% or more of body surface with 80-89% third degree burns	Diagnosis	ICD-10-CM
T31.99	Burns involving 90% or more of body surface with 90% or more third degree burns	Diagnosis	ICD-10-CM
V81.81XA	Occupant of railway train or railway vehicle injured due to explosion or fire on train, initial encounter	Diagnosis	ICD-10-CM
V81.81XD	Occupant of railway train or railway vehicle injured due to explosion or fire on train, subsequent encounter	Diagnosis	ICD-10-CM
V91.0	Burn due to watercraft on fire	Diagnosis	ICD-10-CM
V91.00	Burn due to merchant ship on fire	Diagnosis	ICD-10-CM
V91.00XA	Burn due to merchant ship on fire, initial encounter	Diagnosis	ICD-10-CM
V91.00XD	Burn due to merchant ship on fire, subsequent encounter	Diagnosis	ICD-10-CM
V91.00XS	Burn due to merchant ship on fire, sequela	Diagnosis	ICD-10-CM
V91.01	Burn due to passenger ship on fire	Diagnosis	ICD-10-CM
V91.01XA	Burn due to passenger ship on fire, initial encounter	Diagnosis	ICD-10-CM
V91.01XD	Burn due to passenger ship on fire, subsequent encounter	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
V91.01XS	Burn due to passenger ship on fire, sequela	Diagnosis	ICD-10-CM
V91.02	Burn due to fishing boat on fire	Diagnosis	ICD-10-CM
V91.02XA	Burn due to fishing boat on fire, initial encounter	Diagnosis	ICD-10-CM
V91.02XD	Burn due to fishing boat on fire, subsequent encounter	Diagnosis	ICD-10-CM
V91.02XS	Burn due to fishing boat on fire, sequela	Diagnosis	ICD-10-CM
V91.03	Burn due to other powered watercraft on fire	Diagnosis	ICD-10-CM
V91.03XA	Burn due to other powered watercraft on fire, initial encounter	Diagnosis	ICD-10-CM
V91.03XD	Burn due to other powered watercraft on fire, subsequent encounter	Diagnosis	ICD-10-CM
V91.03XS	Burn due to other powered watercraft on fire, sequela	Diagnosis	ICD-10-CM
V91.04	Burn due to sailboat on fire	Diagnosis	ICD-10-CM
V91.04XA	Burn due to sailboat on fire, initial encounter	Diagnosis	ICD-10-CM
V91.04XD	Burn due to sailboat on fire, subsequent encounter	Diagnosis	ICD-10-CM
V91.04XS	Burn due to sailboat on fire, sequela	Diagnosis	ICD-10-CM
V91.05	Burn due to canoe or kayak on fire	Diagnosis	ICD-10-CM
V91.05XA	Burn due to canoe or kayak on fire, initial encounter	Diagnosis	ICD-10-CM
V91.05XD	Burn due to canoe or kayak on fire, subsequent encounter	Diagnosis	ICD-10-CM
V91.05XS	Burn due to canoe or kayak on fire, sequela	Diagnosis	ICD-10-CM
V91.06	Burn due to (nonpowered) inflatable craft on fire	Diagnosis	ICD-10-CM
V91.06XA	Burn due to (nonpowered) inflatable craft on fire, initial encounter	Diagnosis	ICD-10-CM
V91.06XD	Burn due to (nonpowered) inflatable craft on fire, subsequent encounter	Diagnosis	ICD-10-CM
V91.06XS	Burn due to (nonpowered) inflatable craft on fire, sequela	Diagnosis	ICD-10-CM
V91.07	Burn due to water-skis on fire	Diagnosis	ICD-10-CM
V91.07XA	Burn due to water-skis on fire, initial encounter	Diagnosis	ICD-10-CM
V91.07XD	Burn due to water-skis on fire, subsequent encounter	Diagnosis	ICD-10-CM
V91.07XS	Burn due to water-skis on fire, sequela	Diagnosis	ICD-10-CM
V91.08	Burn due to other unpowered watercraft on fire	Diagnosis	ICD-10-CM
V91.08XA	Burn due to other unpowered watercraft on fire, initial encounter	Diagnosis	ICD-10-CM
V91.08XD	Burn due to other unpowered watercraft on fire, subsequent encounter	Diagnosis	ICD-10-CM
V91.08XS	Burn due to other unpowered watercraft on fire, sequela	Diagnosis	ICD-10-CM
V91.09	Burn due to unspecified watercraft on fire	Diagnosis	ICD-10-CM
V91.09XA	Burn due to unspecified watercraft on fire, initial encounter	Diagnosis	ICD-10-CM
V91.09XD	Burn due to unspecified watercraft on fire, subsequent encounter	Diagnosis	ICD-10-CM
V91.09XS	Burn due to unspecified watercraft on fire, sequela	Diagnosis	ICD-10-CM
V93.0	Burn due to localized fire on board watercraft	Diagnosis	ICD-10-CM
V93.00	Burn due to localized fire on board merchant vessel	Diagnosis	ICD-10-CM
V93.00XA	Burn due to localized fire on board merchant vessel, initial encounter	Diagnosis	ICD-10-CM
V93.00XD	Burn due to localized fire on board merchant vessel, subsequent encounter	Diagnosis	ICD-10-CM
V93.00XS	Burn due to localized fire on board merchant vessel, sequela	Diagnosis	ICD-10-CM
V93.01	Burn due to localized fire on board passenger vessel	Diagnosis	ICD-10-CM
V93.01XA	Burn due to localized fire on board passenger vessel, initial encounter	Diagnosis	ICD-10-CM
V93.01XD	Burn due to localized fire on board passenger vessel, subsequent encounter	Diagnosis	ICD-10-CM
V93.01XS	Burn due to localized fire on board passenger vessel, sequela	Diagnosis	ICD-10-CM
V93.02	Burn due to localized fire on board fishing boat	Diagnosis	ICD-10-CM
V93.02XA	Burn due to localized fire on board fishing boat, initial encounter	Diagnosis	ICD-10-CM
V93.02XD	Burn due to localized fire on board fishing boat, subsequent encounter	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
V93.02XS	Burn due to localized fire on board fishing boat, sequela	Diagnosis	ICD-10-CM
V93.03	Burn due to localized fire on board other powered watercraft	Diagnosis	ICD-10-CM
V93.03XA	Burn due to localized fire on board other powered watercraft, initial encounter	Diagnosis	ICD-10-CM
V93.03XD	Burn due to localized fire on board other powered watercraft, subsequent encounter	Diagnosis	ICD-10-CM
V93.03XS	Burn due to localized fire on board other powered watercraft, sequela	Diagnosis	ICD-10-CM
V93.04	Burn due to localized fire on board sailboat	Diagnosis	ICD-10-CM
V93.04XA	Burn due to localized fire on board sailboat, initial encounter	Diagnosis	ICD-10-CM
V93.04XD	Burn due to localized fire on board sailboat, subsequent encounter	Diagnosis	ICD-10-CM
V93.04XS	Burn due to localized fire on board sailboat, sequela	Diagnosis	ICD-10-CM
V93.09	Burn due to localized fire on board unspecified watercraft	Diagnosis	ICD-10-CM
V93.09XA	Burn due to localized fire on board unspecified watercraft, initial encounter	Diagnosis	ICD-10-CM
V93.09XD	Burn due to localized fire on board unspecified watercraft, subsequent encounter	Diagnosis	ICD-10-CM
V93.09XS	Burn due to localized fire on board unspecified watercraft, sequela	Diagnosis	ICD-10-CM
V93.1	Other burn on board watercraft	Diagnosis	ICD-10-CM
V93.10	Other burn on board merchant vessel	Diagnosis	ICD-10-CM
V93.10XA	Other burn on board merchant vessel, initial encounter	Diagnosis	ICD-10-CM
V93.10XD	Other burn on board merchant vessel, subsequent encounter	Diagnosis	ICD-10-CM
V93.10XS	Other burn on board merchant vessel, sequela	Diagnosis	ICD-10-CM
V93.11	Other burn on board passenger vessel	Diagnosis	ICD-10-CM
V93.11XA	Other burn on board passenger vessel, initial encounter	Diagnosis	ICD-10-CM
V93.11XD	Other burn on board passenger vessel, subsequent encounter	Diagnosis	ICD-10-CM
V93.11XS	Other burn on board passenger vessel, sequela	Diagnosis	ICD-10-CM
V93.12	Other burn on board fishing boat	Diagnosis	ICD-10-CM
V93.12XA	Other burn on board fishing boat, initial encounter	Diagnosis	ICD-10-CM
V93.12XD	Other burn on board fishing boat, subsequent encounter	Diagnosis	ICD-10-CM
V93.12XS	Other burn on board fishing boat, sequela	Diagnosis	ICD-10-CM
V93.13	Other burn on board other powered watercraft	Diagnosis	ICD-10-CM
V93.13XA	Other burn on board other powered watercraft, initial encounter	Diagnosis	ICD-10-CM
V93.13XD	Other burn on board other powered watercraft, subsequent encounter	Diagnosis	ICD-10-CM
V93.13XS	Other burn on board other powered watercraft, sequela	Diagnosis	ICD-10-CM
V93.14	Other burn on board sailboat	Diagnosis	ICD-10-CM
V93.14XA	Other burn on board sailboat, initial encounter	Diagnosis	ICD-10-CM
V93.14XD	Other burn on board sailboat, subsequent encounter	Diagnosis	ICD-10-CM
V93.14XS	Other burn on board sailboat, sequela	Diagnosis	ICD-10-CM
V93.19	Other burn on board unspecified watercraft	Diagnosis	ICD-10-CM
V93.19XA	Other burn on board unspecified watercraft, initial encounter	Diagnosis	ICD-10-CM
V93.19XS	Other burn on board unspecified watercraft, sequela	Diagnosis	ICD-10-CM
X00.0XXA	Exposure to flames in uncontrolled fire in building or structure, initial encounter	Diagnosis	ICD-10-CM
X00.0XXD	Exposure to flames in uncontrolled fire in building or structure, subsequent encounter	Diagnosis	ICD-10-CM
X02.0XXA	Exposure to flames in controlled fire in building or structure, initial encounter	Diagnosis	ICD-10-CM
X02.0XXD	Exposure to flames in controlled fire in building or structure, subsequent	Diagnosis	ICD-10-CM
X08.00	Exposure to bed fire due to unspecified burning material	Diagnosis	ICD-10-CM
X08.00XA	Exposure to bed fire due to unspecified burning material, initial encounter	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
X08.00XD	Exposure to bed fire due to unspecified burning material, subsequent encounter	Diagnosis	ICD-10-CM
X08.00XS	Exposure to bed fire due to unspecified burning material, sequela	Diagnosis	ICD-10-CM
X08.01	Exposure to bed fire due to burning cigarette	Diagnosis	ICD-10-CM
X08.01XA	Exposure to bed fire due to burning cigarette, initial encounter	Diagnosis	ICD-10-CM
X08.01XD	Exposure to bed fire due to burning cigarette, subsequent encounter	Diagnosis	ICD-10-CM
X08.01XS	Exposure to bed fire due to burning cigarette, sequela	Diagnosis	ICD-10-CM
X08.09	Exposure to bed fire due to other burning material	Diagnosis	ICD-10-CM
X08.09XA	Exposure to bed fire due to other burning material, initial encounter	Diagnosis	ICD-10-CM
X08.09XD	Exposure to bed fire due to other burning material, subsequent encounter	Diagnosis	ICD-10-CM
X08.09XS	Exposure to bed fire due to other burning material, sequela	Diagnosis	ICD-10-CM
X08.10	Exposure to sofa fire due to unspecified burning material	Diagnosis	ICD-10-CM
X08.10XA	Exposure to sofa fire due to unspecified burning material, initial encounter	Diagnosis	ICD-10-CM
X08.10XD	Exposure to sofa fire due to unspecified burning material, subsequent encounter	Diagnosis	ICD-10-CM
X08.10XS	Exposure to sofa fire due to unspecified burning material, sequela	Diagnosis	ICD-10-CM
X08.11	Exposure to sofa fire due to burning cigarette	Diagnosis	ICD-10-CM
X08.11XA	Exposure to sofa fire due to burning cigarette, initial encounter	Diagnosis	ICD-10-CM
X08.11XD	Exposure to sofa fire due to burning cigarette, subsequent encounter	Diagnosis	ICD-10-CM
X08.11XS	Exposure to sofa fire due to burning cigarette, sequela	Diagnosis	ICD-10-CM
X08.19	Exposure to sofa fire due to other burning material	Diagnosis	ICD-10-CM
X08.19XA	Exposure to sofa fire due to other burning material, initial encounter	Diagnosis	ICD-10-CM
X08.19XD	Exposure to sofa fire due to other burning material, subsequent encounter	Diagnosis	ICD-10-CM
X08.19XS	Exposure to sofa fire due to other burning material, sequela	Diagnosis	ICD-10-CM
X08.20	Exposure to other furniture fire due to unspecified burning material	Diagnosis	ICD-10-CM
X08.20XA	Exposure to other furniture fire due to unspecified burning material, initial encounter	Diagnosis	ICD-10-CM
X08.20XD	Exposure to other furniture fire due to unspecified burning material, subsequent encounter	Diagnosis	ICD-10-CM
X08.20XS	Exposure to other furniture fire due to unspecified burning material, sequela	Diagnosis	ICD-10-CM
X08.21	Exposure to other furniture fire due to burning cigarette	Diagnosis	ICD-10-CM
X08.21XA	Exposure to other furniture fire due to burning cigarette, initial encounter	Diagnosis	ICD-10-CM
X08.21XD	Exposure to other furniture fire due to burning cigarette, subsequent encounter	Diagnosis	ICD-10-CM
X08.21XS	Exposure to other furniture fire due to burning cigarette, sequela	Diagnosis	ICD-10-CM
X08.29	Exposure to other furniture fire due to other burning material	Diagnosis	ICD-10-CM
X08.29XA	Exposure to other furniture fire due to other burning material, initial encounter	Diagnosis	ICD-10-CM
X08.29XD	Exposure to other furniture fire due to other burning material, subsequent encounter	Diagnosis	ICD-10-CM
X08.29XS	Exposure to other furniture fire due to other burning material, sequela	Diagnosis	ICD-10-CM
X08.8XXA	Exposure to other specified smoke, fire and flames, initial encounter	Diagnosis	ICD-10-CM
X08.8XXD	Exposure to other specified smoke, fire and flames, subsequent encounter	Diagnosis	ICD-10-CM
X76.XXXA	Intentional self-harm by smoke, fire and flames, initial encounter	Diagnosis	ICD-10-CM
X76.XXXD	Intentional self-harm by smoke, fire and flames, subsequent encounter	Diagnosis	ICD-10-CM
X77.3XXA	Intentional self-harm by hot household appliances, initial encounter	Diagnosis	ICD-10-CM
X77.3XXD	Intentional self-harm by hot household appliances, subsequent encounter	Diagnosis	ICD-10-CM
X77.8XXA	Intentional self-harm by other hot objects, initial encounter	Diagnosis	ICD-10-CM
X77.8XXD	Intentional self-harm by other hot objects, subsequent encounter	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
X77.9XXA	Intentional self-harm by unspecified hot objects, initial encounter	Diagnosis	ICD-10-CM
X77.9XXD	Intentional self-harm by unspecified hot objects, subsequent encounter	Diagnosis	ICD-10-CM
Y26.XXXA	Exposure to smoke, fire and flames, undetermined intent, initial encounter	Diagnosis	ICD-10-CM
Y26.XXXD	Exposure to smoke, fire and flames, undetermined intent, subsequent encounter	Diagnosis	ICD-10-CM
Y27.3XXA	Contact with hot household appliance, undetermined intent, initial encounter	Diagnosis	ICD-10-CM
Y27.3XXD	Contact with hot household appliance, undetermined intent, subsequent	Diagnosis	ICD-10-CM
Y27.8XXA	Contact with other hot objects, undetermined intent, initial encounter	Diagnosis	ICD-10-CM
Y27.8XXD	Contact with other hot objects, undetermined intent, subsequent encounter	Diagnosis	ICD-10-CM
Y27.9XXA	Contact with unspecified hot objects, undetermined intent, initial encounter	Diagnosis	ICD-10-CM
Y27.9XXD	Contact with unspecified hot objects, undetermined intent, subsequent encounter	Diagnosis	ICD-10-CM
Glaucoma			
362.85	Retinal nerve fiber bundle defects	Diagnosis	ICD-9-CM
365.00	Unspecified preglaucoma	Diagnosis	ICD-9-CM
365.01	Borderline glaucoma, open angle with borderline findings, low risk	Diagnosis	ICD-9-CM
365.02	Borderline glaucoma with anatomical narrow angle	Diagnosis	ICD-9-CM
365.03	Borderline glaucoma with steroid responders	Diagnosis	ICD-9-CM
365.04	Borderline glaucoma with ocular hypertension	Diagnosis	ICD-9-CM
365.10	Unspecified open-angle glaucoma	Diagnosis	ICD-9-CM
365.11	Primary open-angle glaucoma	Diagnosis	ICD-9-CM
365.12	Low tension open-angle glaucoma	Diagnosis	ICD-9-CM
365.13	Pigmentary open-angle glaucoma	Diagnosis	ICD-9-CM
365.15	Residual stage of open angle glaucoma	Diagnosis	ICD-9-CM
365.20	Unspecified primary angle-closure glaucoma	Diagnosis	ICD-9-CM
365.21	Intermittent angle-closure glaucoma	Diagnosis	ICD-9-CM
365.22	Acute angle-closure glaucoma	Diagnosis	ICD-9-CM
365.23	Chronic angle-closure glaucoma	Diagnosis	ICD-9-CM
365.24	Residual stage of angle-closure glaucoma	Diagnosis	ICD-9-CM
365.31	Corticosteroid-induced glaucoma, glaucomatous stage	Diagnosis	ICD-9-CM
365.32	Corticosteroid-induced glaucoma, residual stage	Diagnosis	ICD-9-CM
365.41	Glaucoma associated with chamber angle anomalies	Diagnosis	ICD-9-CM
365.42	Glaucoma associated with anomalies of iris	Diagnosis	ICD-9-CM
365.43	Glaucoma associated with other anterior segment anomalies	Diagnosis	ICD-9-CM
365.51	Phacolytic glaucoma	Diagnosis	ICD-9-CM
365.52	Pseudoexfoliation glaucoma	Diagnosis	ICD-9-CM
365.59	Glaucoma associated with other lens disorders	Diagnosis	ICD-9-CM
365.60	Glaucoma associated with unspecified ocular disorder	Diagnosis	ICD-9-CM
365.61	Glaucoma associated with pupillary block	Diagnosis	ICD-9-CM
365.62	Glaucoma associated with ocular inflammations	Diagnosis	ICD-9-CM
365.63	Glaucoma associated with vascular disorders of eye	Diagnosis	ICD-9-CM
365.64	Glaucoma associated with tumors or cysts	Diagnosis	ICD-9-CM
365.65	Glaucoma associated with ocular trauma	Diagnosis	ICD-9-CM
365.81	Hypersecretion glaucoma	Diagnosis	ICD-9-CM
365.82	Glaucoma with increased episcleral venous pressure	Diagnosis	ICD-9-CM
365.83	Aqueous misdirection	Diagnosis	ICD-9-CM
365.89	Other specified glaucoma	Diagnosis	ICD-9-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
365.9	Unspecified glaucoma	Diagnosis	ICD-9-CM
377.14	Glaucomatous atrophy (cupping) of optic disc	Diagnosis	ICD-9-CM
H40.001	Preglaucoma, unspecified, right eye	Diagnosis	ICD-10-CM
H40.002	Preglaucoma, unspecified, left eye	Diagnosis	ICD-10-CM
H40.003	Preglaucoma, unspecified, bilateral	Diagnosis	ICD-10-CM
H40.009	Preglaucoma, unspecified, unspecified eye	Diagnosis	ICD-10-CM
H40.011	Open angle with borderline findings, low risk, right eye	Diagnosis	ICD-10-CM
H40.012	Open angle with borderline findings, low risk, left eye	Diagnosis	ICD-10-CM
H40.013	Open angle with borderline findings, low risk, bilateral	Diagnosis	ICD-10-CM
H40.019	Open angle with borderline findings, low risk, unspecified eye	Diagnosis	ICD-10-CM
H40.031	Anatomical narrow angle, right eye	Diagnosis	ICD-10-CM
H40.032	Anatomical narrow angle, left eye	Diagnosis	ICD-10-CM
H40.033	Anatomical narrow angle, bilateral	Diagnosis	ICD-10-CM
H40.039	Anatomical narrow angle, unspecified eye	Diagnosis	ICD-10-CM
H40.041	Steroid responder, right eye	Diagnosis	ICD-10-CM
H40.042	Steroid responder, left eye	Diagnosis	ICD-10-CM
H40.043	Steroid responder, bilateral	Diagnosis	ICD-10-CM
H40.049	Steroid responder, unspecified eye	Diagnosis	ICD-10-CM
H40.051	Ocular hypertension, right eye	Diagnosis	ICD-10-CM
H40.052	Ocular hypertension, left eye	Diagnosis	ICD-10-CM
H40.053	Ocular hypertension, bilateral	Diagnosis	ICD-10-CM
H40.059	Ocular hypertension, unspecified eye	Diagnosis	ICD-10-CM
H40.10X0	Unspecified open-angle glaucoma, stage unspecified	Diagnosis	ICD-10-CM
H40.10X1	Unspecified open-angle glaucoma, mild stage	Diagnosis	ICD-10-CM
H40.10X2	Unspecified open-angle glaucoma, moderate stage	Diagnosis	ICD-10-CM
H40.10X3	Unspecified open-angle glaucoma, severe stage	Diagnosis	ICD-10-CM
H40.10X4	Unspecified open-angle glaucoma, indeterminate stage	Diagnosis	ICD-10-CM
H40.1110	Primary open-angle glaucoma, right eye, stage unspecified	Diagnosis	ICD-10-CM
H40.1111	Primary open-angle glaucoma, right eye, mild stage	Diagnosis	ICD-10-CM
H40.1112	Primary open-angle glaucoma, right eye, moderate stage	Diagnosis	ICD-10-CM
H40.1113	Primary open-angle glaucoma, right eye, severe stage	Diagnosis	ICD-10-CM
H40.1114	Primary open-angle glaucoma, right eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.1120	Primary open-angle glaucoma, left eye, stage unspecified	Diagnosis	ICD-10-CM
H40.1121	Primary open-angle glaucoma, left eye, mild stage	Diagnosis	ICD-10-CM
H40.1122	Primary open-angle glaucoma, left eye, moderate stage	Diagnosis	ICD-10-CM
H40.1123	Primary open-angle glaucoma, left eye, severe stage	Diagnosis	ICD-10-CM
H40.1124	Primary open-angle glaucoma, left eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.1130	Primary open-angle glaucoma, bilateral, stage unspecified	Diagnosis	ICD-10-CM
H40.1131	Primary open-angle glaucoma, bilateral, mild stage	Diagnosis	ICD-10-CM
H40.1132	Primary open-angle glaucoma, bilateral, moderate stage	Diagnosis	ICD-10-CM
H40.1133	Primary open-angle glaucoma, bilateral, severe stage	Diagnosis	ICD-10-CM
H40.1134	Primary open-angle glaucoma, bilateral, indeterminate stage	Diagnosis	ICD-10-CM
H40.1190	Primary open-angle glaucoma, unspecified eye, stage unspecified	Diagnosis	ICD-10-CM
H40.1191	Primary open-angle glaucoma, unspecified eye, mild stage	Diagnosis	ICD-10-CM
H40.1192	Primary open-angle glaucoma, unspecified eye, moderate stage	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
H40.1193	Primary open-angle glaucoma, unspecified eye, severe stage	Diagnosis	ICD-10-CM
H40.1194	Primary open-angle glaucoma, unspecified eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.11X0	Primary open-angle glaucoma, stage unspecified	Diagnosis	ICD-10-CM
H40.11X1	Primary open-angle glaucoma, mild stage	Diagnosis	ICD-10-CM
H40.11X2	Primary open-angle glaucoma, moderate stage	Diagnosis	ICD-10-CM
H40.11X3	Primary open-angle glaucoma, severe stage	Diagnosis	ICD-10-CM
H40.11X4	Primary open-angle glaucoma, indeterminate stage	Diagnosis	ICD-10-CM
H40.1210	Low-tension glaucoma, right eye, stage unspecified	Diagnosis	ICD-10-CM
H40.1211	Low-tension glaucoma, right eye, mild stage	Diagnosis	ICD-10-CM
H40.1212	Low-tension glaucoma, right eye, moderate stage	Diagnosis	ICD-10-CM
H40.1213	Low-tension glaucoma, right eye, severe stage	Diagnosis	ICD-10-CM
H40.1214	Low-tension glaucoma, right eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.1220	Low-tension glaucoma, left eye, stage unspecified	Diagnosis	ICD-10-CM
H40.1221	Low-tension glaucoma, left eye, mild stage	Diagnosis	ICD-10-CM
H40.1222	Low-tension glaucoma, left eye, moderate stage	Diagnosis	ICD-10-CM
H40.1223	Low-tension glaucoma, left eye, severe stage	Diagnosis	ICD-10-CM
H40.1224	Low-tension glaucoma, left eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.1230	Low-tension glaucoma, bilateral, stage unspecified	Diagnosis	ICD-10-CM
H40.1231	Low-tension glaucoma, bilateral, mild stage	Diagnosis	ICD-10-CM
H40.1232	Low-tension glaucoma, bilateral, moderate stage	Diagnosis	ICD-10-CM
H40.1233	Low-tension glaucoma, bilateral, severe stage	Diagnosis	ICD-10-CM
H40.1234	Low-tension glaucoma, bilateral, indeterminate stage	Diagnosis	ICD-10-CM
H40.1290	Low-tension glaucoma, unspecified eye, stage unspecified	Diagnosis	ICD-10-CM
H40.1291	Low-tension glaucoma, unspecified eye, mild stage	Diagnosis	ICD-10-CM
H40.1292	Low-tension glaucoma, unspecified eye, moderate stage	Diagnosis	ICD-10-CM
H40.1293	Low-tension glaucoma, unspecified eye, severe stage	Diagnosis	ICD-10-CM
H40.1294	Low-tension glaucoma, unspecified eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.1310	Pigmentary glaucoma, right eye, stage unspecified	Diagnosis	ICD-10-CM
H40.1311	Pigmentary glaucoma, right eye, mild stage	Diagnosis	ICD-10-CM
H40.1312	Pigmentary glaucoma, right eye, moderate stage	Diagnosis	ICD-10-CM
H40.1313	Pigmentary glaucoma, right eye, severe stage	Diagnosis	ICD-10-CM
H40.1314	Pigmentary glaucoma, right eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.1320	Pigmentary glaucoma, left eye, stage unspecified	Diagnosis	ICD-10-CM
H40.1321	Pigmentary glaucoma, left eye, mild stage	Diagnosis	ICD-10-CM
H40.1322	Pigmentary glaucoma, left eye, moderate stage	Diagnosis	ICD-10-CM
H40.1323	Pigmentary glaucoma, left eye, severe stage	Diagnosis	ICD-10-CM
H40.1324	Pigmentary glaucoma, left eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.1330	Pigmentary glaucoma, bilateral, stage unspecified	Diagnosis	ICD-10-CM
H40.1331	Pigmentary glaucoma, bilateral, mild stage	Diagnosis	ICD-10-CM
H40.1332	Pigmentary glaucoma, bilateral, moderate stage	Diagnosis	ICD-10-CM
H40.1333	Pigmentary glaucoma, bilateral, severe stage	Diagnosis	ICD-10-CM
H40.1334	Pigmentary glaucoma, bilateral, indeterminate stage	Diagnosis	ICD-10-CM
H40.1390	Pigmentary glaucoma, unspecified eye, stage unspecified	Diagnosis	ICD-10-CM
H40.1391	Pigmentary glaucoma, unspecified eye, mild stage	Diagnosis	ICD-10-CM
H40.1392	Pigmentary glaucoma, unspecified eye, moderate stage	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
H40.1393	Pigmentary glaucoma, unspecified eye, severe stage	Diagnosis	ICD-10-CM
H40.1394	Pigmentary glaucoma, unspecified eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.1410	Capsular glaucoma with pseudoexfoliation of lens, right eye, stage unspecified	Diagnosis	ICD-10-CM
H40.1411	Capsular glaucoma with pseudoexfoliation of lens, right eye, mild stage	Diagnosis	ICD-10-CM
H40.1412	Capsular glaucoma with pseudoexfoliation of lens, right eye, moderate stage	Diagnosis	ICD-10-CM
H40.1413	Capsular glaucoma with pseudoexfoliation of lens, right eye, severe stage	Diagnosis	ICD-10-CM
H40.1414	Capsular glaucoma with pseudoexfoliation of lens, right eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.1420	Capsular glaucoma with pseudoexfoliation of lens, left eye, stage unspecified	Diagnosis	ICD-10-CM
H40.1421	Capsular glaucoma with pseudoexfoliation of lens, left eye, mild stage	Diagnosis	ICD-10-CM
H40.1422	Capsular glaucoma with pseudoexfoliation of lens, left eye, moderate stage	Diagnosis	ICD-10-CM
H40.1423	Capsular glaucoma with pseudoexfoliation of lens, left eye, severe stage	Diagnosis	ICD-10-CM
H40.1424	Capsular glaucoma with pseudoexfoliation of lens, left eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.1430	Capsular glaucoma with pseudoexfoliation of lens, bilateral, stage unspecified	Diagnosis	ICD-10-CM
H40.1431	Capsular glaucoma with pseudoexfoliation of lens, bilateral, mild stage	Diagnosis	ICD-10-CM
H40.1432	Capsular glaucoma with pseudoexfoliation of lens, bilateral, moderate stage	Diagnosis	ICD-10-CM
H40.1433	Capsular glaucoma with pseudoexfoliation of lens, bilateral, severe stage	Diagnosis	ICD-10-CM
H40.1434	Capsular glaucoma with pseudoexfoliation of lens, bilateral, indeterminate stage	Diagnosis	ICD-10-CM
H40.1490	Capsular glaucoma with pseudoexfoliation of lens, unspecified eye, stage unspecified	Diagnosis	ICD-10-CM
H40.1491	Capsular glaucoma with pseudoexfoliation of lens, unspecified eye, mild stage	Diagnosis	ICD-10-CM
H40.1492	Capsular glaucoma with pseudoexfoliation of lens, unspecified eye, moderate	Diagnosis	ICD-10-CM
H40.1493	Capsular glaucoma with pseudoexfoliation of lens, unspecified eye, severe stage	Diagnosis	ICD-10-CM
H40.1494	Capsular glaucoma with pseudoexfoliation of lens, unspecified eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.151	Residual stage of open-angle glaucoma, right eye	Diagnosis	ICD-10-CM
H40.152	Residual stage of open-angle glaucoma, left eye	Diagnosis	ICD-10-CM
H40.153	Residual stage of open-angle glaucoma, bilateral	Diagnosis	ICD-10-CM
H40.159	Residual stage of open-angle glaucoma, unspecified eye	Diagnosis	ICD-10-CM
H40.20X0	Unspecified primary angle-closure glaucoma, stage unspecified	Diagnosis	ICD-10-CM
H40.20X1	Unspecified primary angle-closure glaucoma, mild stage	Diagnosis	ICD-10-CM
H40.20X2	Unspecified primary angle-closure glaucoma, moderate stage	Diagnosis	ICD-10-CM
H40.20X3	Unspecified primary angle-closure glaucoma, severe stage	Diagnosis	ICD-10-CM
H40.20X4	Unspecified primary angle-closure glaucoma, indeterminate stage	Diagnosis	ICD-10-CM
H40.211	Acute angle-closure glaucoma, right eye	Diagnosis	ICD-10-CM
H40.212	Acute angle-closure glaucoma, left eye	Diagnosis	ICD-10-CM
H40.213	Acute angle-closure glaucoma, bilateral	Diagnosis	ICD-10-CM
H40.219	Acute angle-closure glaucoma, unspecified eye	Diagnosis	ICD-10-CM
H40.2210	Chronic angle-closure glaucoma, right eye, stage unspecified	Diagnosis	ICD-10-CM
H40.2211	Chronic angle-closure glaucoma, right eye, mild stage	Diagnosis	ICD-10-CM
H40.2212	Chronic angle-closure glaucoma, right eye, moderate stage	Diagnosis	ICD-10-CM
H40.2213	Chronic angle-closure glaucoma, right eye, severe stage	Diagnosis	ICD-10-CM
H40.2214	Chronic angle-closure glaucoma, right eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.2220	Chronic angle-closure glaucoma, left eye, stage unspecified	Diagnosis	ICD-10-CM
H40.2221	Chronic angle-closure glaucoma, left eye, mild stage	Diagnosis	ICD-10-CM
H40.2222	Chronic angle-closure glaucoma, left eye, moderate stage	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
H40.2223	Chronic angle-closure glaucoma, left eye, severe stage	Diagnosis	ICD-10-CM
H40.2224	Chronic angle-closure glaucoma, left eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.2230	Chronic angle-closure glaucoma, bilateral, stage unspecified	Diagnosis	ICD-10-CM
H40.2231	Chronic angle-closure glaucoma, bilateral, mild stage	Diagnosis	ICD-10-CM
H40.2232	Chronic angle-closure glaucoma, bilateral, moderate stage	Diagnosis	ICD-10-CM
H40.2233	Chronic angle-closure glaucoma, bilateral, severe stage	Diagnosis	ICD-10-CM
H40.2234	Chronic angle-closure glaucoma, bilateral, indeterminate stage	Diagnosis	ICD-10-CM
H40.2290	Chronic angle-closure glaucoma, unspecified eye, stage unspecified	Diagnosis	ICD-10-CM
H40.2291	Chronic angle-closure glaucoma, unspecified eye, mild stage	Diagnosis	ICD-10-CM
H40.2292	Chronic angle-closure glaucoma, unspecified eye, moderate stage	Diagnosis	ICD-10-CM
H40.2293	Chronic angle-closure glaucoma, unspecified eye, severe stage	Diagnosis	ICD-10-CM
H40.2294	Chronic angle-closure glaucoma, unspecified eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.231	Intermittent angle-closure glaucoma, right eye	Diagnosis	ICD-10-CM
H40.232	Intermittent angle-closure glaucoma, left eye	Diagnosis	ICD-10-CM
H40.233	Intermittent angle-closure glaucoma, bilateral	Diagnosis	ICD-10-CM
H40.239	Intermittent angle-closure glaucoma, unspecified eye	Diagnosis	ICD-10-CM
H40.241	Residual stage of angle-closure glaucoma, right eye	Diagnosis	ICD-10-CM
H40.242	Residual stage of angle-closure glaucoma, left eye	Diagnosis	ICD-10-CM
H40.243	Residual stage of angle-closure glaucoma, bilateral	Diagnosis	ICD-10-CM
H40.249	Residual stage of angle-closure glaucoma, unspecified eye	Diagnosis	ICD-10-CM
H40.30X0	Glaucoma secondary to eye trauma, unspecified eye, stage unspecified	Diagnosis	ICD-10-CM
H40.30X1	Glaucoma secondary to eye trauma, unspecified eye, mild stage	Diagnosis	ICD-10-CM
H40.30X2	Glaucoma secondary to eye trauma, unspecified eye, moderate stage	Diagnosis	ICD-10-CM
H40.30X3	Glaucoma secondary to eye trauma, unspecified eye, severe stage	Diagnosis	ICD-10-CM
H40.30X4	Glaucoma secondary to eye trauma, unspecified eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.31X0	Glaucoma secondary to eye trauma, right eye, stage unspecified	Diagnosis	ICD-10-CM
H40.31X1	Glaucoma secondary to eye trauma, right eye, mild stage	Diagnosis	ICD-10-CM
H40.31X2	Glaucoma secondary to eye trauma, right eye, moderate stage	Diagnosis	ICD-10-CM
H40.31X3	Glaucoma secondary to eye trauma, right eye, severe stage	Diagnosis	ICD-10-CM
H40.31X4	Glaucoma secondary to eye trauma, right eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.32X0	Glaucoma secondary to eye trauma, left eye, stage unspecified	Diagnosis	ICD-10-CM
H40.32X1	Glaucoma secondary to eye trauma, left eye, mild stage	Diagnosis	ICD-10-CM
H40.32X2	Glaucoma secondary to eye trauma, left eye, moderate stage	Diagnosis	ICD-10-CM
H40.32X3	Glaucoma secondary to eye trauma, left eye, severe stage	Diagnosis	ICD-10-CM
H40.32X4	Glaucoma secondary to eye trauma, left eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.33X0	Glaucoma secondary to eye trauma, bilateral, stage unspecified	Diagnosis	ICD-10-CM
H40.33X1	Glaucoma secondary to eye trauma, bilateral, mild stage	Diagnosis	ICD-10-CM
H40.33X2	Glaucoma secondary to eye trauma, bilateral, moderate stage	Diagnosis	ICD-10-CM
H40.33X3	Glaucoma secondary to eye trauma, bilateral, severe stage	Diagnosis	ICD-10-CM
H40.33X4	Glaucoma secondary to eye trauma, bilateral, indeterminate stage	Diagnosis	ICD-10-CM
H40.40X0	Glaucoma secondary to eye inflammation, unspecified eye, stage unspecified	Diagnosis	ICD-10-CM
H40.40X1	Glaucoma secondary to eye inflammation, unspecified eye, mild stage	Diagnosis	ICD-10-CM
H40.40X2	Glaucoma secondary to eye inflammation, unspecified eye, moderate stage	Diagnosis	ICD-10-CM
H40.40X3	Glaucoma secondary to eye inflammation, unspecified eye, severe stage	Diagnosis	ICD-10-CM
H40.40X4	Glaucoma secondary to eye inflammation, unspecified eye, indeterminate stage	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
H40.41X0	Glaucoma secondary to eye inflammation, right eye, stage unspecified	Diagnosis	ICD-10-CM
H40.41X1	Glaucoma secondary to eye inflammation, right eye, mild stage	Diagnosis	ICD-10-CM
H40.41X2	Glaucoma secondary to eye inflammation, right eye, moderate stage	Diagnosis	ICD-10-CM
H40.41X3	Glaucoma secondary to eye inflammation, right eye, severe stage	Diagnosis	ICD-10-CM
H40.41X4	Glaucoma secondary to eye inflammation, right eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.42X0	Glaucoma secondary to eye inflammation, left eye, stage unspecified	Diagnosis	ICD-10-CM
H40.42X1	Glaucoma secondary to eye inflammation, left eye, mild stage	Diagnosis	ICD-10-CM
H40.42X2	Glaucoma secondary to eye inflammation, left eye, moderate stage	Diagnosis	ICD-10-CM
H40.42X3	Glaucoma secondary to eye inflammation, left eye, severe stage	Diagnosis	ICD-10-CM
H40.42X4	Glaucoma secondary to eye inflammation, left eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.43X0	Glaucoma secondary to eye inflammation, bilateral, stage unspecified	Diagnosis	ICD-10-CM
H40.43X1	Glaucoma secondary to eye inflammation, bilateral, mild stage	Diagnosis	ICD-10-CM
H40.43X2	Glaucoma secondary to eye inflammation, bilateral, moderate stage	Diagnosis	ICD-10-CM
H40.43X3	Glaucoma secondary to eye inflammation, bilateral, severe stage	Diagnosis	ICD-10-CM
H40.43X4	Glaucoma secondary to eye inflammation, bilateral, indeterminate stage	Diagnosis	ICD-10-CM
H40.50X0	Glaucoma secondary to other eye disorders, unspecified eye, stage unspecified	Diagnosis	ICD-10-CM
H40.50X1	Glaucoma secondary to other eye disorders, unspecified eye, mild stage	Diagnosis	ICD-10-CM
H40.50X2	Glaucoma secondary to other eye disorders, unspecified eye, moderate stage	Diagnosis	ICD-10-CM
H40.50X3	Glaucoma secondary to other eye disorders, unspecified eye, severe stage	Diagnosis	ICD-10-CM
H40.50X4	Glaucoma secondary to other eye disorders, unspecified eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.51X0	Glaucoma secondary to other eye disorders, right eye, stage unspecified	Diagnosis	ICD-10-CM
H40.51X1	Glaucoma secondary to other eye disorders, right eye, mild stage	Diagnosis	ICD-10-CM
H40.51X2	Glaucoma secondary to other eye disorders, right eye, moderate stage	Diagnosis	ICD-10-CM
H40.51X3	Glaucoma secondary to other eye disorders, right eye, severe stage	Diagnosis	ICD-10-CM
H40.51X4	Glaucoma secondary to other eye disorders, right eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.52X0	Glaucoma secondary to other eye disorders, left eye, stage unspecified	Diagnosis	ICD-10-CM
H40.52X1	Glaucoma secondary to other eye disorders, left eye, mild stage	Diagnosis	ICD-10-CM
H40.52X2	Glaucoma secondary to other eye disorders, left eye, moderate stage	Diagnosis	ICD-10-CM
H40.52X3	Glaucoma secondary to other eye disorders, left eye, severe stage	Diagnosis	ICD-10-CM
H40.52X4	Glaucoma secondary to other eye disorders, left eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.53X0	Glaucoma secondary to other eye disorders, bilateral, stage unspecified	Diagnosis	ICD-10-CM
H40.53X1	Glaucoma secondary to other eye disorders, bilateral, mild stage	Diagnosis	ICD-10-CM
H40.53X2	Glaucoma secondary to other eye disorders, bilateral, moderate stage	Diagnosis	ICD-10-CM
H40.53X3	Glaucoma secondary to other eye disorders, bilateral, severe stage	Diagnosis	ICD-10-CM
H40.53X4	Glaucoma secondary to other eye disorders, bilateral, indeterminate stage	Diagnosis	ICD-10-CM
H40.60X0	Glaucoma secondary to drugs, unspecified eye, stage unspecified	Diagnosis	ICD-10-CM
H40.60X1	Glaucoma secondary to drugs, unspecified eye, mild stage	Diagnosis	ICD-10-CM
H40.60X2	Glaucoma secondary to drugs, unspecified eye, moderate stage	Diagnosis	ICD-10-CM
H40.60X3	Glaucoma secondary to drugs, unspecified eye, severe stage	Diagnosis	ICD-10-CM
H40.60X4	Glaucoma secondary to drugs, unspecified eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.61X0	Glaucoma secondary to drugs, right eye, stage unspecified	Diagnosis	ICD-10-CM
H40.61X1	Glaucoma secondary to drugs, right eye, mild stage	Diagnosis	ICD-10-CM
H40.61X2	Glaucoma secondary to drugs, right eye, moderate stage	Diagnosis	ICD-10-CM
H40.61X3	Glaucoma secondary to drugs, right eye, severe stage	Diagnosis	ICD-10-CM
H40.61X4	Glaucoma secondary to drugs, right eye, indeterminate stage	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
H40.62X0	Glaucoma secondary to drugs, left eye, stage unspecified	Diagnosis	ICD-10-CM
H40.62X1	Glaucoma secondary to drugs, left eye, mild stage	Diagnosis	ICD-10-CM
H40.62X2	Glaucoma secondary to drugs, left eye, moderate stage	Diagnosis	ICD-10-CM
H40.62X3	Glaucoma secondary to drugs, left eye, severe stage	Diagnosis	ICD-10-CM
H40.62X4	Glaucoma secondary to drugs, left eye, indeterminate stage	Diagnosis	ICD-10-CM
H40.63X0	Glaucoma secondary to drugs, bilateral, stage unspecified	Diagnosis	ICD-10-CM
H40.63X1	Glaucoma secondary to drugs, bilateral, mild stage	Diagnosis	ICD-10-CM
H40.63X2	Glaucoma secondary to drugs, bilateral, moderate stage	Diagnosis	ICD-10-CM
H40.63X3	Glaucoma secondary to drugs, bilateral, severe stage	Diagnosis	ICD-10-CM
H40.63X4	Glaucoma secondary to drugs, bilateral, indeterminate stage	Diagnosis	ICD-10-CM
H40.811	Glaucoma with increased episcleral venous pressure, right eye	Diagnosis	ICD-10-CM
H40.812	Glaucoma with increased episcleral venous pressure, left eye	Diagnosis	ICD-10-CM
H40.813	Glaucoma with increased episcleral venous pressure, bilateral	Diagnosis	ICD-10-CM
H40.819	Glaucoma with increased episcleral venous pressure, unspecified eye	Diagnosis	ICD-10-CM
H40.821	Hypersecretion glaucoma, right eye	Diagnosis	ICD-10-CM
H40.822	Hypersecretion glaucoma, left eye	Diagnosis	ICD-10-CM
H40.823	Hypersecretion glaucoma, bilateral	Diagnosis	ICD-10-CM
H40.829	Hypersecretion glaucoma, unspecified eye	Diagnosis	ICD-10-CM
H40.831	Aqueous misdirection, right eye	Diagnosis	ICD-10-CM
H40.832	Aqueous misdirection, left eye	Diagnosis	ICD-10-CM
H40.833	Aqueous misdirection, bilateral	Diagnosis	ICD-10-CM
H40.839	Aqueous misdirection, unspecified eye	Diagnosis	ICD-10-CM
H40.89	Other specified glaucoma	Diagnosis	ICD-10-CM
H40.9	Unspecified glaucoma	Diagnosis	ICD-10-CM
H42	Glaucoma in diseases classified elsewhere	Diagnosis	ICD-10-CM
H44.511	Absolute glaucoma, right eye	Diagnosis	ICD-10-CM
H44.512	Absolute glaucoma, left eye	Diagnosis	ICD-10-CM
H44.513	Absolute glaucoma, bilateral	Diagnosis	ICD-10-CM
H44.519	Absolute glaucoma, unspecified eye	Diagnosis	ICD-10-CM
H47.231	Glaucomatous optic atrophy, right eye	Diagnosis	ICD-10-CM
H47.232	Glaucomatous optic atrophy, left eye	Diagnosis	ICD-10-CM
H47.233	Glaucomatous optic atrophy, bilateral	Diagnosis	ICD-10-CM
H47.239	Glaucomatous optic atrophy, unspecified eye	Diagnosis	ICD-10-CM
Q15.0	Congenital glaucoma	Diagnosis	ICD-10-CM
Autism			
299.0	Autistic disorder	Diagnosis	ICD-9-CM
299.00	Autistic disorder, current or active state	Diagnosis	ICD-9-CM
299.01	Autistic disorder, residual state	Diagnosis	ICD-9-CM
299.1	Childhood disintegrative disorder	Diagnosis	ICD-9-CM
299.11	Childhood disintegrative disorder, residual state	Diagnosis	ICD-9-CM
299.8	Other specified pervasive developmental disorders	Diagnosis	ICD-9-CM
299.80	Other specified pervasive developmental disorders, current or active state	Diagnosis	ICD-9-CM
299.81	Other specified pervasive developmental disorders, residual state	Diagnosis	ICD-9-CM
299.9	Unspecified pervasive developmental disorder	Diagnosis	ICD-9-CM
299.90	Unspecified pervasive developmental disorder, current or active state	Diagnosis	ICD-9-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
299.91	Unspecified pervasive developmental disorder, residual state	Diagnosis	ICD-9-CM
F84.0	Autistic disorder	Diagnosis	ICD-10-CM
F84.3	Other childhood disintegrative disorder	Diagnosis	ICD-10-CM
F84.5	Asperger's syndrome	Diagnosis	ICD-10-CM
F84.8	Other pervasive developmental disorders	Diagnosis	ICD-10-CM
F84.9	Pervasive developmental disorder, unspecified	Diagnosis	ICD-10-CM
Marfan's Syndrome			
759.82	Marfan's syndrome	Diagnosis	ICD-9-CM
Q87.4	Marfan's syndrome	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
Q87.42	Marfan's syndrome with ocular manifestations	Diagnosis	ICD-10-CM
Q87.43	Marfan's syndrome with skeletal manifestation	Diagnosis	ICD-10-CM
Pheochromocytoma/Paraganglioma			
194.0	Malignant neoplasm of adrenal gland	Diagnosis	ICD-9-CM
194.6	Malignant neoplasm of aortic body and other paraganglia	Diagnosis	ICD-9-CM
227.6	Benign neoplasm of aortic body and other paraganglia	Diagnosis	ICD-9-CM
237.2	Neoplasm of uncertain behavior of adrenal gland	Diagnosis	ICD-9-CM
237.3	Neoplasm of uncertain behavior of paraganglia	Diagnosis	ICD-9-CM
238.8	Neoplasm of uncertain behavior of other specified sites	Diagnosis	ICD-9-CM
C74.1	Malignant neoplasm of medulla of adrenal gland	Diagnosis	ICD-10-CM
C74.9	Malignant neoplasm of unspecified part of adrenal gland	Diagnosis	ICD-10-CM
C75.5	Malignant neoplasm of aortic body and other paraganglia	Diagnosis	ICD-10-CM
D35.0	Benign neoplasm of adrenal gland	Diagnosis	ICD-10-CM
D35.6	Benign neoplasm of aortic body and other paraganglia	Diagnosis	ICD-10-CM
D44.1	Neoplasm of uncertain behavior of adrenal 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
D48.7	Neoplasm of uncertain behavior of other specified sites	Diagnosis	ICD-10-CM
Diabetes			
249.00	Secondary diabetes mellitus without mention of complication, not stated as uncontrolled, or unspecified	Diagnosis	ICD-9-CM
249.01	Secondary diabetes mellitus without mention of complication, uncontrolled	Diagnosis	ICD-9-CM
249.10	Secondary diabetes mellitus with ketoacidosis, not stated as uncontrolled, or unspecified	Diagnosis	ICD-9-CM
249.11	Secondary diabetes mellitus with ketoacidosis, uncontrolled	Diagnosis	ICD-9-CM
249.20	Secondary diabetes mellitus with hyperosmolarity, not stated as uncontrolled, or unspecified	Diagnosis	ICD-9-CM
249.21	Secondary diabetes mellitus with hyperosmolarity, uncontrolled	Diagnosis	ICD-9-CM
249.30	Secondary diabetes mellitus with other coma, not stated as uncontrolled, or unspecified	Diagnosis	ICD-9-CM
249.31	Secondary diabetes mellitus with other coma, uncontrolled	Diagnosis	ICD-9-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
249.40	Secondary diabetes mellitus with renal manifestations, not stated as uncontrolled, or unspecified	Diagnosis	ICD-9-CM
249.41	Secondary diabetes mellitus with renal manifestations, uncontrolled	Diagnosis	ICD-9-CM
249.50	Secondary diabetes mellitus with ophthalmic manifestations, not stated as uncontrolled, or unspecified	Diagnosis	ICD-9-CM
249.51	Secondary diabetes mellitus with ophthalmic manifestations, uncontrolled	Diagnosis	ICD-9-CM
249.60	Secondary diabetes mellitus with neurological manifestations, not stated as uncontrolled, or unspecified	Diagnosis	ICD-9-CM
249.61	Secondary diabetes mellitus with neurological manifestations, uncontrolled	Diagnosis	ICD-9-CM
249.70	Secondary diabetes mellitus with peripheral circulatory disorders, not stated as uncontrolled, or unspecified	Diagnosis	ICD-9-CM
249.71	Secondary diabetes mellitus with peripheral circulatory disorders, uncontrolled	Diagnosis	ICD-9-CM
249.80	Secondary diabetes mellitus with other specified manifestations, not stated as uncontrolled, or unspecified	Diagnosis	ICD-9-CM
249.81	Secondary diabetes mellitus with other specified manifestations, uncontrolled	Diagnosis	ICD-9-CM
249.90	Secondary diabetes mellitus with unspecified complication, not stated as uncontrolled, or unspecified	Diagnosis	ICD-9-CM
249.91	Secondary diabetes mellitus with unspecified complication, uncontrolled	Diagnosis	ICD-9-CM
250.00	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled	Diagnosis	ICD-9-CM
250.01	Diabetes mellitus without mention of complication, type I [juvenile type], not stated as uncontrolled	Diagnosis	ICD-9-CM
250.02	Diabetes mellitus without mention of complication, type II or unspecified type, uncontrolled	Diagnosis	ICD-9-CM
250.03	Diabetes mellitus without mention of complication, type I [juvenile type], uncontrolled	Diagnosis	ICD-9-CM
250.10	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled	Diagnosis	ICD-9-CM
250.11	Diabetes with ketoacidosis, type I [juvenile type], not stated as uncontrolled	Diagnosis	ICD-9-CM
250.12	Diabetes with ketoacidosis, type II or unspecified type, uncontrolled	Diagnosis	ICD-9-CM
250.13	Diabetes with ketoacidosis, type I [juvenile type], uncontrolled	Diagnosis	ICD-9-CM
250.20	Diabetes with hyperosmolarity, type II or unspecified type, not stated as uncontrolled	Diagnosis	ICD-9-CM
250.21	Diabetes with hyperosmolarity, type I [juvenile type], not stated as uncontrolled	Diagnosis	ICD-9-CM
250.22	Diabetes with hyperosmolarity, type II or unspecified type, uncontrolled	Diagnosis	ICD-9-CM
250.23	Diabetes with hyperosmolarity, type I [juvenile type], uncontrolled	Diagnosis	ICD-9-CM
250.30	Diabetes with other coma, type II or unspecified type, not stated as uncontrolled	Diagnosis	ICD-9-CM
250.31	Diabetes with other coma, type I [juvenile type], not stated as uncontrolled	Diagnosis	ICD-9-CM
250.32	Diabetes with other coma, type II or unspecified type, uncontrolled	Diagnosis	ICD-9-CM
250.33	Diabetes with other coma, type I [juvenile type], uncontrolled	Diagnosis	ICD-9-CM
250.40	Diabetes with renal manifestations, type II or unspecified type, not stated as uncontrolled	Diagnosis	ICD-9-CM
250.41	Diabetes with renal manifestations, type I [juvenile type], not stated as	Diagnosis	ICD-9-CM
250.42	Diabetes with renal manifestations, type II or unspecified type, uncontrolled	Diagnosis	ICD-9-CM
250.43	Diabetes with renal manifestations, type I [juvenile type], uncontrolled	Diagnosis	ICD-9-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
250.50	Diabetes with ophthalmic manifestations, type II or unspecified type, not stated as uncontrolled	Diagnosis	ICD-9-CM
250.51	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled	Diagnosis	ICD-9-CM
250.52	Diabetes with ophthalmic manifestations, type II or unspecified type, uncontrolled	Diagnosis	ICD-9-CM
250.53	Diabetes with ophthalmic manifestations, type I [juvenile type], uncontrolled	Diagnosis	ICD-9-CM
250.60	Diabetes with neurological manifestations, type II or unspecified type, not stated as uncontrolled	Diagnosis	ICD-9-CM
250.61	Diabetes with neurological manifestations, type I [juvenile type], not stated as uncontrolled	Diagnosis	ICD-9-CM
250.62	Diabetes with neurological manifestations, type II or unspecified type,	Diagnosis	ICD-9-CM
250.63	Diabetes with neurological manifestations, type I [juvenile type], uncontrolled	Diagnosis	ICD-9-CM
250.70	Diabetes with peripheral circulatory disorders, type II or unspecified type, not stated as uncontrolled	Diagnosis	ICD-9-CM
250.71	Diabetes with peripheral circulatory disorders, type I [juvenile type], not stated as uncontrolled	Diagnosis	ICD-9-CM
250.72	Diabetes with peripheral circulatory disorders, type II or unspecified type, uncontrolled	Diagnosis	ICD-9-CM
250.73	Diabetes with peripheral circulatory disorders, type I [juvenile type], uncontrolled	Diagnosis	ICD-9-CM
250.80	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled	Diagnosis	ICD-9-CM
250.81	Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled	Diagnosis	ICD-9-CM
250.82	Diabetes with other specified manifestations, type II or unspecified type, uncontrolled	Diagnosis	ICD-9-CM
250.83	Diabetes with other specified manifestations, type I [juvenile type], uncontrolled	Diagnosis	ICD-9-CM
250.90	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled	Diagnosis	ICD-9-CM
250.91	Diabetes with unspecified complication, type I [juvenile type], not stated as uncontrolled	Diagnosis	ICD-9-CM
250.92	Diabetes with unspecified complication, type II or unspecified type, uncontrolled	Diagnosis	ICD-9-CM
250.93	Diabetes with unspecified complication, type I [juvenile type], uncontrolled	Diagnosis	ICD-9-CM
357.2	Polyneuropathy in diabetes	Diagnosis	ICD-9-CM
362.01	Background diabetic retinopathy	Diagnosis	ICD-9-CM
362.02	Proliferative diabetic retinopathy	Diagnosis	ICD-9-CM
362.03	Nonproliferative diabetic retinopathy NOS	Diagnosis	ICD-9-CM
362.04	Mild nonproliferative diabetic retinopathy	Diagnosis	ICD-9-CM
362.05	Moderate nonproliferative diabetic retinopathy	Diagnosis	ICD-9-CM
362.06	Severe nonproliferative diabetic retinopathy	Diagnosis	ICD-9-CM
366.41	Diabetic cataract	Diagnosis	ICD-9-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
E08.10	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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
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
E08.311	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
E08.321	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
E08.3299	Diabetes mellitus due to underlying condition with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
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
E08.341	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
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
E08.351	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
E08.3521	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
E08.3531	Diabetes mellitus due to underlying condition with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
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	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
E08.3551	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
E08.37X1	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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
E08.39	Diabetes mellitus due to underlying condition with other diabetic ophthalmic complication	Diagnosis	ICD-10-CM
E08.40	Diabetes mellitus due to underlying condition with diabetic neuropathy,	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 (poly)neuropathy	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
E08.51	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
E08.610	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
E08.620	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
E08.630	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
E08.641	Diabetes mellitus due to underlying condition with hypoglycemia with coma	Diagnosis	ICD-10-CM
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
E09.00	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
E09.10	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
E09.21	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	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
E09.321	Drug or chemical induced diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
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
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
E09.331	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
E09.341	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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
E09.3413	Drug or chemical induced diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral	Diagnosis	ICD-10-CM
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
E09.351	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
E09.3521	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
E09.3531	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye	Diagnosis	ICD-10-CM
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
E09.3541	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
E09.3542	Drug or chemical induced diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye	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, bilateral	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, unspecified eye	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
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
E09.40	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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
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
E09.51	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
E09.610	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
E09.620	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
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
E09.630	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
E09.641	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
E10.10	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
E10.21	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
E10.311	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
E10.321	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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
E10.3291	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye	Diagnosis	ICD-10-CM
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
E10.331	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
E10.341	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
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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
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
E10.351	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular	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
E10.3521	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
E10.3531	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye	Diagnosis	ICD-10-CM
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
E10.3541	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
E10.3551	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	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
E10.3591	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right 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
E10.37X1	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
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
E10.40	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
E10.51	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
E10.610	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
E10.620	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
E10.630	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
E10.641	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
E11.00	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
E11.10	Type 2 diabetes mellitus with ketoacidosis without coma	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
E11.11	Type 2 diabetes mellitus with ketoacidosis with coma	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
E11.311	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
E11.321	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
E11.331	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
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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
E11.3399	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye	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
E11.3499	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye	Diagnosis	ICD-10-CM
E11.351	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye	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
E11.3521	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
E11.3531	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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
E11.3539	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye	Diagnosis	ICD-10-CM
E11.3541	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
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
E11.3551	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	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
E11.37X1	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
E11.40	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
E11.51	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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
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
E11.620	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
E11.630	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
E11.641	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
E13.00	Other specified diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)	Diagnosis	ICD-10-CM
E13.01	Other specified diabetes mellitus with hyperosmolarity with coma	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
E13.21	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
E13.311	Other specified diabetes mellitus with unspecified diabetic retinopathy with macular edema	Diagnosis	ICD-10-CM
E13.319	Other specified diabetes mellitus with unspecified diabetic retinopathy without macular edema	Diagnosis	ICD-10-CM
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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
E13.3299	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	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
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
E13.341	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
E13.351	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
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
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
E13.3531	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
E13.3541	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye	Diagnosis	ICD-10-CM
E13.3542	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye	Diagnosis	ICD-10-CM
E13.3543	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral	Diagnosis	ICD-10-CM
E13.3549	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye	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, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) 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
E13.39	Other specified diabetes mellitus with other diabetic ophthalmic complication	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
E13.51	Other specified diabetes mellitus with diabetic peripheral angiopathy without gangrene	Diagnosis	ICD-10-CM
E13.52	Other specified diabetes mellitus with diabetic peripheral angiopathy with	Diagnosis	ICD-10-CM
E13.59	Other specified diabetes mellitus with other circulatory complications	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
E13.620	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
E13.630	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
E13.641	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
Insulin			

0740T	Remote autonomous algorithm-based recommendation system for insulin dose calculation and titration; initial set-up and patient education	Procedure	CPT-3
0741T	Remote autonomous algorithm-based recommendation system for insulin dose calculation and titration; provision of software, data collection, transmission, and storage, each 30 days	Procedure	CPT-3

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Code	Description	Code Category	Code Type
43755	Gastric intubation and aspiration, diagnostic; collection of multiple fractional specimens with gastric stimulation, single or double lumen tube (gastric secretory study) (eg, histamine, insulin, pentagastrin, calcium, secretin), includes drug administration	Procedure	CPT-4
80422	Glucagon tolerance panel; for insulinoma This panel must include the following: Glucose (82947 x 3) Insulin (83525 x 3)	Procedure	CPT-4
80432	Insulin-induced C-peptide suppression panel This panel must include the following: Insulin (83525) C-peptide (84681 x 5) Glucose (82947 x 5)	Procedure	CPT-4
80434	Insulin tolerance panel; for ACTH insufficiency This panel must include the following: Cortisol (82533 x 5) Glucose (82947 x 5)	Procedure	CPT-4
80435	Insulin tolerance panel; for growth hormone deficiency This panel must include the following: Glucose (82947 x 5) Human growth hormone (HGH) (83003 x 5)	Procedure	CPT-4
81506	Endocrinology (type 2 diabetes), biochemical assays of seven analytes (glucose, HbA1c, insulin, hs-CRP, adiponectin, ferritin, interleukin 2-receptor alpha), utilizing serum or plasma, algorithm reporting a risk score	Procedure	CPT-4
83525	Insulin; total	Procedure	CPT-4
83527	Insulin; free	Procedure	CPT-4
84206	Proinsulin	Procedure	CPT-4
86337	Insulin antibodies	Procedure	CPT-4
91052	Gastric analysis test with injection of stimulant of gastric secretion (eg, histamine, insulin, pentagastrin, calcium and secretin)	Procedure	CPT-4
A4221	Supplies for maintenance of noninsulin drug infusion catheter, per week (list drugs separately)	Procedure	HCPCS
A4224	Supplies for maintenance of insulin infusion catheter, per week	Procedure	HCPCS
A4225	Supplies for external insulin infusion pump, syringe type cartridge, sterile, each	Procedure	HCPCS
A4226	Supplies for maintenance of insulin infusion pump with dosage rate adjustment using therapeutic continuous glucose sensing, per week	Procedure	HCPCS
A4230	Infusion set for external insulin pump, nonneedle cannula type	Procedure	HCPCS
A4231	Infusion set for external insulin pump, needle type	Procedure	HCPCS
A4232	Syringe with needle for external insulin pump, sterile, 3 cc	Procedure	HCPCS
A9274	External ambulatory insulin delivery system, disposable, each, includes all supplies and accessories	Procedure	HCPCS
E0784	External ambulatory infusion pump, insulin	Procedure	HCPCS
E0787	External ambulatory infusion pump, insulin, dosage rate adjustment using therapeutic continuous glucose sensing	Procedure	HCPCS
G9147	Outpatient Intravenous Insulin Treatment (OIVIT) either pulsatile or continuous, by any means, guided by the results of measurements for: respiratory quotient; and/or, urine urea nitrogen (UUN); and/or, arterial, venous or capillary glucose; and/or potassium concentration	Procedure	HCPCS
J1815	Injection, insulin, per 5 units	Procedure	HCPCS
J1817	Insulin for administration through DME (i.e., insulin pump) per 50 units	Procedure	HCPCS
K0552	Supplies for external noninsulin drug infusion pump, syringe type cartridge, sterile, each	Procedure	HCPCS

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Code	Description	Code Category	Code Type
S1034	Artificial pancreas device system (e.g., low glucose suspend [LGS] feature) including continuous glucose monitor, blood glucose device, insulin pump and computer algorithm that communicates with all of the devices	Procedure	HCPCS
S5550	Insulin, rapid onset, 5 units	Procedure	HCPCS
S5551	Insulin, most rapid onset (Lispro or Aspart); 5 units	Procedure	HCPCS
S5552	Insulin, intermediate acting (NPH or LENTE); 5 units	Procedure	HCPCS
S5553	Insulin, long acting; 5 units	Procedure	HCPCS
S5560	Insulin delivery device, reusable pen; 1.5 ml size	Procedure	HCPCS
S5561	Insulin delivery device, reusable pen; 3 ml size	Procedure	HCPCS
S5565	Insulin cartridge for use in insulin delivery device other than pump; 150 units	Procedure	HCPCS
S5566	Insulin cartridge for use in insulin delivery device other than pump; 300 units	Procedure	HCPCS
S5570	Insulin delivery device, disposable pen (including insulin); 1.5 ml size	Procedure	HCPCS
S5571	Insulin delivery device, disposable pen (including insulin); 3 ml size	Procedure	HCPCS
S8490	Insulin syringes (100 syringes, any size)	Procedure	HCPCS
S9145	Insulin pump initiation, instruction in initial use of pump (pump not included)	Procedure	HCPCS
S9353	Home infusion therapy, continuous insulin infusion therapy; administrative services, professional pharmacy services, care coordination, and all necessary supplies and equipment (drugs and nursing visits coded separately), per diem	Procedure	HCPCS
Congenital Kidney Disease			
016.00	Tuberculosis of kidney, confirmation unspecified	Diagnosis	ICD-9-CM
016.01	Tuberculosis of kidney, bacteriological or histological examination not done	Diagnosis	ICD-9-CM
016.02	Tuberculosis of kidney, bacteriological or histological examination unknown (at present)	Diagnosis	ICD-9-CM
016.03	Tuberculosis of kidney, tubercle bacilli found (in sputum) by microscopy	Diagnosis	ICD-9-CM
016.04	Tuberculosis of kidney, tubercle bacilli not found (in sputum) by microscopy, but found by bacterial culture	Diagnosis	ICD-9-CM
016.05	Tuberculosis of kidney, tubercle bacilli not found by bacteriological examination, but tuberculosis confirmed histologically	Diagnosis	ICD-9-CM
016.06	Tuberculosis of kidney, tubercle bacilli not found by bacteriological or histological examination, but tuberculosis confirmed by other methods [inoculation of animals]	Diagnosis	ICD-9-CM
095.4	Syphilis of kidney	Diagnosis	ICD-9-CM
189.0	Malignant neoplasm of kidney, except pelvis	Diagnosis	ICD-9-CM
189.9	Malignant neoplasm of urinary organ, site unspecified	Diagnosis	ICD-9-CM
223.0	Benign neoplasm of kidney, except pelvis	Diagnosis	ICD-9-CM
236.91	Neoplasm of uncertain behavior of kidney and ureter	Diagnosis	ICD-9-CM
249.40	Secondary diabetes mellitus with renal manifestations, not stated as uncontrolled, or unspecified	Diagnosis	ICD-9-CM
249.41	Secondary diabetes mellitus with renal manifestations, uncontrolled	Diagnosis	ICD-9-CM
250.40	Diabetes with renal manifestations, type II or unspecified type, not stated as uncontrolled	Diagnosis	ICD-9-CM
250.41	Diabetes with renal manifestations, type I [juvenile type], not stated as uncontrolled	Diagnosis	ICD-9-CM
250.42	Diabetes with renal manifestations, type II or unspecified type, uncontrolled	Diagnosis	ICD-9-CM
250.43	Diabetes with renal manifestations, type I [juvenile type], uncontrolled	Diagnosis	ICD-9-CM
271.4	Renal glycosuria	Diagnosis	ICD-9-CM
274.10	Gouty nephropathy, unspecified	Diagnosis	ICD-9-CM

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Code	Description	Code Category	Code Type
283.11	Hemolytic-uremic syndrome	Diagnosis	ICD-9-CM
403.01	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM
403.11	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM
403.91	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM
404.02	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM
404.03	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM
404.12	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM
404.13	Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM
404.92	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM
404.93	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease	Diagnosis	ICD-9-CM
440.1	Atherosclerosis of renal artery	Diagnosis	ICD-9-CM
442.1	Aneurysm of renal artery	Diagnosis	ICD-9-CM
572.4	Hepatorenal syndrome	Diagnosis	ICD-9-CM
580.0	Acute glomerulonephritis with lesion of proliferative glomerulonephritis	Diagnosis	ICD-9-CM
580.4	Acute glomerulonephritis with lesion of rapidly progressive glomerulonephritis	Diagnosis	ICD-9-CM
580.81	Acute glomerulonephritis with other specified pathological lesion in kidney in disease classified elsewhere	Diagnosis	ICD-9-CM
580.89	Other acute glomerulonephritis with other specified pathological lesion in kidney	Diagnosis	ICD-9-CM
580.9	Acute glomerulonephritis with unspecified pathological lesion in kidney	Diagnosis	ICD-9-CM
581.0	Nephrotic syndrome with lesion of proliferative glomerulonephritis	Diagnosis	ICD-9-CM
581.1	Nephrotic syndrome with lesion of membranous glomerulonephritis	Diagnosis	ICD-9-CM
581.2	Nephrotic syndrome with lesion of membranoproliferative glomerulonephritis	Diagnosis	ICD-9-CM
581.3	Nephrotic syndrome with lesion of minimal change glomerulonephritis	Diagnosis	ICD-9-CM
581.81	Nephrotic syndrome with other specified pathological lesion in kidney in diseases classified elsewhere	Diagnosis	ICD-9-CM
581.89	Other nephrotic syndrome with specified pathological lesion in kidney	Diagnosis	ICD-9-CM
581.9	Nephrotic syndrome with unspecified pathological lesion in kidney	Diagnosis	ICD-9-CM
582.0	Chronic glomerulonephritis with lesion of proliferative glomerulonephritis	Diagnosis	ICD-9-CM
582.1	Chronic glomerulonephritis with lesion of membranous glomerulonephritis	Diagnosis	ICD-9-CM
582.2	Chronic glomerulonephritis with lesion of membranoproliferative glomerulonephritis	Diagnosis	ICD-9-CM
582.4	Chronic glomerulonephritis with lesion of rapidly progressive glomerulonephritis	Diagnosis	ICD-9-CM
582.81	Chronic glomerulonephritis with other specified pathological lesion in kidney in diseases classified elsewhere	Diagnosis	ICD-9-CM
582.89	Other chronic glomerulonephritis with specified pathological lesion in kidney	Diagnosis	ICD-9-CM
582.9	Chronic glomerulonephritis with unspecified pathological lesion in kidney	Diagnosis	ICD-9-CM

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Code	Description	Code Category	Code Type
583.0	Nephritis and nephropathy, not specified as acute or chronic, with lesion of proliferative glomerulonephritis	Diagnosis	ICD-9-CM
583.1	Nephritis and nephropathy, not specified as acute or chronic, with lesion of membranous glomerulonephritis	Diagnosis	ICD-9-CM
583.2	Nephritis and nephropathy, not specified as acute or chronic, with lesion of membranoproliferative glomerulonephritis	Diagnosis	ICD-9-CM
583.4	Nephritis and nephropathy, not specified as acute or chronic, with lesion of rapidly progressive glomerulonephritis	Diagnosis	ICD-9-CM
583.6	Nephritis and nephropathy, not specified as acute or chronic, with lesion of renal cortical necrosis	Diagnosis	ICD-9-CM
583.7	Nephritis and nephropathy, not specified as acute or chronic, with lesion of renal medullary necrosis	Diagnosis	ICD-9-CM
583.81	Nephritis and nephropathy, not specified as acute or chronic, with other specified pathological lesion in kidney, in diseases classified elsewhere	Diagnosis	ICD-9-CM
583.89	Other nephritis and nephropathy, not specified as acute or chronic, with specified pathological lesion in kidney	Diagnosis	ICD-9-CM
583.9	Nephritis and nephropathy, not specified as acute or chronic, with unspecified pathological lesion in kidney	Diagnosis	ICD-9-CM
584.5	Acute kidney failure with lesion of tubular necrosis	Diagnosis	ICD-9-CM
584.6	Acute kidney failure with lesion of renal cortical necrosis	Diagnosis	ICD-9-CM
584.7	Acute kidney failure with lesion of medullary [papillary] necrosis	Diagnosis	ICD-9-CM
584.8	Acute kidney failure with other specified pathological lesion in kidney	Diagnosis	ICD-9-CM
584.9	Acute kidney failure, unspecified	Diagnosis	ICD-9-CM
585.1	Chronic kidney disease, Stage I	Diagnosis	ICD-9-CM
585.2	Chronic kidney disease, Stage II (mild)	Diagnosis	ICD-9-CM
585.3	Chronic kidney disease, Stage III (moderate)	Diagnosis	ICD-9-CM
585.4	Chronic kidney disease, Stage IV (severe)	Diagnosis	ICD-9-CM
585.5	Chronic kidney disease, Stage V	Diagnosis	ICD-9-CM
585.6	End stage renal disease	Diagnosis	ICD-9-CM
585.9	Chronic kidney disease, unspecified	Diagnosis	ICD-9-CM
586	Unspecified renal failure	Diagnosis	ICD-9-CM
587	Unspecified renal sclerosis	Diagnosis	ICD-9-CM
588.0	Renal osteodystrophy	Diagnosis	ICD-9-CM
588.1	Nephrogenic diabetes insipidus	Diagnosis	ICD-9-CM
588.81	Secondary hyperparathyroidism (of renal origin)	Diagnosis	ICD-9-CM
588.89	Other specified disorders resulting from impaired renal function	Diagnosis	ICD-9-CM
588.9	Unspecified disorder resulting from impaired renal function	Diagnosis	ICD-9-CM
591	Hydronephrosis	Diagnosis	ICD-9-CM
753.12	Congenital polycystic kidney, unspecified type	Diagnosis	ICD-9-CM
753.13	Congenital polycystic kidney, autosomal dominant	Diagnosis	ICD-9-CM
753.14	Congenital polycystic kidney, autosomal recessive	Diagnosis	ICD-9-CM
753.15	Congenital renal dysplasia	Diagnosis	ICD-9-CM
753.16	Congenital medullary cystic kidney	Diagnosis	ICD-9-CM
753.17	Congenital medullary sponge kidney	Diagnosis	ICD-9-CM
753.19	Other specified congenital cystic kidney disease	Diagnosis	ICD-9-CM

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Code	Description	Code Category	Code Type
753.20	Unspecified obstructive defect of renal pelvis and ureter	Diagnosis	ICD-9-CM
753.21	Congenital obstruction of ureteropelvic junction	Diagnosis	ICD-9-CM
753.22	Congenital obstruction of ureterovesical junction	Diagnosis	ICD-9-CM
753.23	Congenital ureterocele	Diagnosis	ICD-9-CM
753.29	Other obstructive defect of renal pelvis and ureter	Diagnosis	ICD-9-CM
794.4	Nonspecific abnormal results of kidney function study	Diagnosis	ICD-9-CM
A18.11	Tuberculosis of kidney and ureter	Diagnosis	ICD-10-CM
A52.75	Syphilis of kidney and ureter	Diagnosis	ICD-10-CM
B52.0	Plasmodium malariae malaria with nephropathy	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
C68.9	Malignant neoplasm of urinary organ, unspecified	Diagnosis	ICD-10-CM
D30.00	Benign neoplasm of unspecified kidney	Diagnosis	ICD-10-CM
D30.01	Benign neoplasm of right kidney	Diagnosis	ICD-10-CM
D30.02	Benign neoplasm of left kidney	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
D59.3	Hemolytic-uremic syndrome	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
E08.65	Diabetes mellitus due to underlying condition with hyperglycemia	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
E10.65	Type 1 diabetes mellitus with hyperglycemia	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
E11.65	Type 2 diabetes mellitus with hyperglycemia	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

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Code	Description	Code Category	Code Type
E74.8	Other specified disorders of carbohydrate metabolism	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
I13.10	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
I70.1	Atherosclerosis of renal artery	Diagnosis	ICD-10-CM
I72.2	Aneurysm of renal artery	Diagnosis	ICD-10-CM
K76.7	Hepatorenal syndrome	Diagnosis	ICD-10-CM
M10.30	Gout due to renal impairment, unspecified site	Diagnosis	ICD-10-CM
M10.311	Gout due to renal impairment, right shoulder	Diagnosis	ICD-10-CM
M10.312	Gout due to renal impairment, left shoulder	Diagnosis	ICD-10-CM
M10.319	Gout due to renal impairment, unspecified shoulder	Diagnosis	ICD-10-CM
M10.321	Gout due to renal impairment, right elbow	Diagnosis	ICD-10-CM
M10.322	Gout due to renal impairment, left elbow	Diagnosis	ICD-10-CM
M10.329	Gout due to renal impairment, unspecified elbow	Diagnosis	ICD-10-CM
M10.331	Gout due to renal impairment, right wrist	Diagnosis	ICD-10-CM
M10.332	Gout due to renal impairment, left wrist	Diagnosis	ICD-10-CM
M10.339	Gout due to renal impairment, unspecified wrist	Diagnosis	ICD-10-CM
M10.341	Gout due to renal impairment, right hand	Diagnosis	ICD-10-CM
M10.342	Gout due to renal impairment, left hand	Diagnosis	ICD-10-CM
M10.349	Gout due to renal impairment, unspecified hand	Diagnosis	ICD-10-CM
M10.351	Gout due to renal impairment, right hip	Diagnosis	ICD-10-CM
M10.352	Gout due to renal impairment, left hip	Diagnosis	ICD-10-CM
M10.359	Gout due to renal impairment, unspecified hip	Diagnosis	ICD-10-CM
M10.361	Gout due to renal impairment, right knee	Diagnosis	ICD-10-CM
M10.362	Gout due to renal impairment, left knee	Diagnosis	ICD-10-CM
M10.369	Gout due to renal impairment, unspecified knee	Diagnosis	ICD-10-CM
M10.371	Gout due to renal impairment, right ankle and foot	Diagnosis	ICD-10-CM
M10.372	Gout due to renal impairment, left ankle and foot	Diagnosis	ICD-10-CM
M10.379	Gout due to renal impairment, unspecified ankle and foot	Diagnosis	ICD-10-CM
M10.38	Gout due to renal impairment, vertebrae	Diagnosis	ICD-10-CM
M10.39	Gout due to renal impairment, multiple sites	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	Sjogren syndrome with tubulo-interstitial nephropathy	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

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Code	Description	Code Category	Code Type
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
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
N00.A	Acute nephritic syndrome with C3 glomerulonephritis	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	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
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
N01.A	Rapidly progressive nephritic syndrome with C3 glomerulonephritis	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
N02.A	Recurrent and persistent hematuria with C3 glomerulonephritis	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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
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
N03.A	Chronic nephritic syndrome with C3 glomerulonephritis	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
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
N04.A	Nephrotic syndrome with C3 glomerulonephritis	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
N05.A	Unspecified nephritic syndrome with C3 glomerulonephritis	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
N06.A	Isolated proteinuria with C3 glomerulonephritis	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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
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
N07.9	Hereditary nephropathy, not elsewhere classified with unspecified morphologic lesions	Diagnosis	ICD-10-CM
N07.A	Hereditary nephropathy, not elsewhere classified with C3 glomerulonephritis	Diagnosis	ICD-10-CM
N08	Glomerular disorders in diseases classified elsewhere	Diagnosis	ICD-10-CM
N13.1	Hydronephrosis with ureteral stricture, not elsewhere classified	Diagnosis	ICD-10-CM
N13.2	Hydronephrosis with renal and ureteral calculous obstruction	Diagnosis	ICD-10-CM
N13.30	Unspecified hydronephrosis	Diagnosis	ICD-10-CM
N13.39	Other hydronephrosis	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
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
N17.0	Acute kidney failure with tubular necrosis	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
N17.8	Other acute kidney failure	Diagnosis	ICD-10-CM
N17.9	Acute kidney failure, unspecified	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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
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
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
Q62.0	Congenital hydronephrosis	Diagnosis	ICD-10-CM
Q62.10	Congenital occlusion of ureter, unspecified	Diagnosis	ICD-10-CM
Q62.11	Congenital occlusion of ureteropelvic junction	Diagnosis	ICD-10-CM
Q62.12	Congenital occlusion of ureterovesical orifice	Diagnosis	ICD-10-CM
Q62.2	Congenital megaureter	Diagnosis	ICD-10-CM
Q62.31	Congenital ureterocele, orthotopic	Diagnosis	ICD-10-CM
Q62.32	Cecoureterocele	Diagnosis	ICD-10-CM
Q62.39	Other obstructive defects of renal pelvis and ureter	Diagnosis	ICD-10-CM
R94.4	Abnormal results of kidney function studies	Diagnosis	ICD-10-CM
Congenital Liver Disease			
570	Acute and subacute necrosis of liver	Diagnosis	ICD-9-CM
571.0	Alcoholic fatty liver	Diagnosis	ICD-9-CM
571.1	Acute alcoholic hepatitis	Diagnosis	ICD-9-CM
571.2	Alcoholic cirrhosis of liver	Diagnosis	ICD-9-CM
571.3	Unspecified alcoholic liver damage	Diagnosis	ICD-9-CM
571.5	Cirrhosis of liver without mention of alcohol	Diagnosis	ICD-9-CM
571.6	Biliary cirrhosis	Diagnosis	ICD-9-CM
571.8	Other chronic nonalcoholic liver disease	Diagnosis	ICD-9-CM
571.9	Unspecified chronic liver disease without mention of alcohol	Diagnosis	ICD-9-CM
572.0	Abscess of liver	Diagnosis	ICD-9-CM
572.1	Portal pyemia	Diagnosis	ICD-9-CM
572.2	Hepatic encephalopathy	Diagnosis	ICD-9-CM
572.3	Portal hypertension	Diagnosis	ICD-9-CM
572.4	Hepatorenal syndrome	Diagnosis	ICD-9-CM
572.8	Other sequelae of chronic liver disease	Diagnosis	ICD-9-CM
573.0	Chronic passive congestion of liver	Diagnosis	ICD-9-CM
573.1	Hepatitis in viral diseases classified elsewhere	Diagnosis	ICD-9-CM
573.2	Hepatitis in other infectious diseases classified elsewhere	Diagnosis	ICD-9-CM
573.3	Unspecified hepatitis	Diagnosis	ICD-9-CM
573.4	Hepatic infarction	Diagnosis	ICD-9-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
573.5	Hepatopulmonary syndrome	Diagnosis	ICD-9-CM
573.8	Other specified disorders of liver	Diagnosis	ICD-9-CM
573.9	Unspecified disorder of liver	Diagnosis	ICD-9-CM
574.50	Calculus of bile duct without mention of cholecystitis or obstruction	Diagnosis	ICD-9-CM
574.51	Calculus of bile duct without mention of cholecystitis, with obstruction	Diagnosis	ICD-9-CM
576.1	Cholangitis	Diagnosis	ICD-9-CM
789.1	Hepatomegaly	Diagnosis	ICD-9-CM
789.2	Splenomegaly	Diagnosis	ICD-9-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
K70.30	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
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
K71.11	Toxic liver disease with hepatic necrosis, with coma	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
K72.00	Acute and subacute hepatic failure without coma	Diagnosis	ICD-10-CM
K72.01	Acute and subacute hepatic failure with coma	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
K74.0	Hepatic fibrosis	Diagnosis	ICD-10-CM
K74.00	Hepatic fibrosis, unspecified	Diagnosis	ICD-10-CM
K74.01	Hepatic fibrosis, early fibrosis	Diagnosis	ICD-10-CM
K74.02	Hepatic fibrosis, advanced 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
K74.60	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
K75.81	Nonalcoholic steatohepatitis (NASH)	Diagnosis	ICD-10-CM
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

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code	Description	Code Category	Code Type
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
K76.5	Hepatic veno-occlusive disease	Diagnosis	ICD-10-CM
K76.6	Portal hypertension	Diagnosis	ICD-10-CM
K76.7	Hepatorenal syndrome	Diagnosis	ICD-10-CM
K76.81	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
K77	Liver disorders in diseases classified elsewhere	Diagnosis	ICD-10-CM
K80.30	Calculus of bile duct with cholangitis, unspecified, without obstruction	Diagnosis	ICD-10-CM
K80.31	Calculus of bile duct with cholangitis, unspecified, with obstruction	Diagnosis	ICD-10-CM
K80.32	Calculus of bile duct with acute cholangitis without obstruction	Diagnosis	ICD-10-CM
K80.33	Calculus of bile duct with acute cholangitis with obstruction	Diagnosis	ICD-10-CM
K80.34	Calculus of bile duct with chronic cholangitis without obstruction	Diagnosis	ICD-10-CM
K80.35	Calculus of bile duct with chronic cholangitis with obstruction	Diagnosis	ICD-10-CM
K80.36	Calculus of bile duct with acute and chronic cholangitis without obstruction	Diagnosis	ICD-10-CM
K80.37	Calculus of bile duct with acute and chronic cholangitis with obstruction	Diagnosis	ICD-10-CM
K83.0	Cholangitis	Diagnosis	ICD-10-CM
R16.0	Hepatomegaly, not elsewhere classified	Diagnosis	ICD-10-CM
R16.2	Hepatomegaly with splenomegaly, not elsewhere classified	Diagnosis	ICD-10-CM
V42.7	Liver replaced by transplant	Diagnosis	ICD-9-CM
V58.44	Aftercare following organ transplant	Diagnosis	ICD-9-CM
Z48.23	Encounter for aftercare following liver transplant	Diagnosis	ICD-10-CM
Z94.4	Liver transplant status	Diagnosis	ICD-10-CM
Hypoglycemia			
251.1	Other specified hypoglycemia	Diagnosis	ICD-9-CM
251.2	Hypoglycemia, unspecified	Diagnosis	ICD-9-CM
775.6	Neonatal hypoglycemia	Diagnosis	ICD-9-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
E08.649	Diabetes mellitus due to underlying condition with hypoglycemia without coma	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
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
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
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
E16.0	Drug-induced hypoglycemia without coma	Diagnosis	ICD-10-CM

Appendix E. List of Current Procedural Terminology, Fourth Edition (CPT-4), Current Procedural Terminology, Third Edition (CPT-3), Healthcare Common Procedure Coding System, Level II (HCPCS), International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Codes Used to Define Covariates in this Request

Code		Description	Code Category	Code Type
E16.1	Other hypoglycemia		Diagnosis	ICD-10-CM
E16.2	Hypoglycemia, unspecified		Diagnosis	ICD-10-CM
P70.3	Iatrogenic neonatal hypoglycemia		Diagnosis	ICD-10-CM
P70.4	Other neonatal hypoglycemia		Diagnosis	ICD-10-CM

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

Generic Name	Brand Name
Insulin	
Insulin Regular, Human/Insulin Release Unit/Chamber/Inhaler	Exubera Kit
insulin NPH human isophane	Humulin N NPH Insulin KwikPen
insulin NPH human isophane	Humulin N NPH U-100 Insulin
insulin NPH human isophane	Humulin N Pen
insulin NPH human isophane	Novolin N FlexPen
insulin NPH human isophane	Novolin N InnoLet
insulin NPH human isophane	Novolin N NPH U-100 Insulin
insulin NPH human isophane	Novolin N PenFill
insulin NPH human isophane/insulin regular, human	Humulin 50/50
insulin NPH human isophane/insulin regular, human	Humulin 70/30 Insulin Pen
insulin NPH human isophane/insulin regular, human	Humulin 70/30 U-100 Insulin
insulin NPH human isophane/insulin regular, human	Humulin 70/30 U-100 KwikPen
insulin NPH human isophane/insulin regular, human	Novolin 70-30 FlexPen U-100
insulin NPH human isophane/insulin regular, human	Novolin 70/30 InnoLet Insulin
insulin NPH human isophane/insulin regular, human	Novolin 70/30 PenFill
insulin NPH human isophane/insulin regular, human	Novolin 70/30 U-100 Insulin
insulin aspart	Novolog FlexPen U-100 Insulin
insulin aspart	Novolog PenFill U-100 Insulin
insulin aspart	Novolog U-100 Insulin aspart
insulin aspart	insulin aspart U-100
insulin aspart (niacinamide)	Fiasp FlexTouch U-100 Insulin
insulin aspart (niacinamide)	Fiasp Penfill U-100 Insulin
insulin aspart (niacinamide)	Fiasp U-100 Insulin
insulin aspart protamine human/insulin aspart	Novolog Mix 70-30 U-100 Insulin
insulin aspart protamine human/insulin aspart	Novolog Mix 70-30FlexPen U-100
insulin aspart protamine human/insulin aspart	insulin asp prt-insulin aspart
insulin degludec	Tresiba FlexTouch U-100
insulin degludec	Tresiba FlexTouch U-200
insulin degludec	Tresiba U-100 Insulin
insulin degludec	insulin degludec
insulin degludec/liraglutide	Xultophy 100/3.6
insulin detemir	Levemir FlexPen
insulin detemir	Levemir FlexTouch U-100 Insulin
insulin detemir	Levemir U-100 Insulin
insulin glargine,human recombinant analog	Basaglar KwikPen U-100 Insulin
insulin glargine,human recombinant analog	Basaglar Tempo Pen(U-100)Insln
insulin glargine,human recombinant analog	Lantus Solostar U-100 Insulin
insulin glargine,human recombinant analog	Lantus U-100 Insulin
insulin glargine,human recombinant analog	Semglee Pen U-100 Insulin
insulin glargine,human recombinant analog	Semglee U-100 Insulin

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

Generic Name	Brand Name
insulin glargine,human recombinant analog	Toujeo Max U-300 SoloStar
insulin glargine,human recombinant analog	Toujeo SoloStar U-300 Insulin
insulin glargine,human recombinant analog	insulin glargine
insulin glargine,human recombinant analog/lixisenatide	Soliqua 100/33
insulin glargine-yfgn	Semglee(insulin glarg-yfgn)Pen
insulin glargine-yfgn	Semglee(insulin glargine-yfgn)
insulin glargine-yfgn	insulin glargine-yfgn
insulin glulisine	Apidra SoloStar U-100 Insulin
insulin glulisine	Apidra U-100 Insulin
insulin lispro	Admelog SoloStar U-100 Insulin
insulin lispro	Admelog U-100 Insulin lispro
insulin lispro	Humalog Junior KwikPen U-100
insulin lispro	Humalog KwikPen Insulin
insulin lispro	Humalog Pen
insulin lispro	Humalog Tempo Pen(U-100)Insuln
insulin lispro	Humalog U-100 Insulin
insulin lispro	insulin lispro
insulin lispro protamine and insulin lispro	Humalog Mix 50-50 Insuln U-100
insulin lispro protamine and insulin lispro	Humalog Mix 50-50 KwikPen
insulin lispro protamine and insulin lispro	Humalog Mix 75-25 KwikPen
insulin lispro protamine and insulin lispro	Humalog Mix 75-25(U-100)Insuln
insulin lispro protamine and insulin lispro	insulin lispro protamin-lispro
insulin lispro-aabc	Lyumjev KwikPen U-100 Insulin
insulin lispro-aabc	Lyumjev KwikPen U-200 Insulin
insulin lispro-aabc	Lyumjev Tempo Pen(U-100)Insuln
insulin lispro-aabc	Lyumjev U-100 Insulin
insulin regular, human	Afrezza
insulin regular, human	Humulin R Regular U-100 Insuln
insulin regular, human	Humulin R U-500 (Conc) Insulin
insulin regular, human	Humulin R U-500 (Conc) Kwikpen
insulin regular, human	Novolin R FlexPen
insulin regular, human	Novolin R InnoLet
insulin regular, human	Novolin R PenFill
insulin regular, human	Novolin R Regular U-100 Insulin
insulin regular, human in 0.9 % sodium chloride	Myxredlin
insulin regular, human/insulin release unit	Exubera Combination Pack 12
insulin regular, human/insulin release unit	Exubera Combination Pack 15
insulin regular, human/insulin release unit	Exubera Patient Pack

Appendix G. Specifications Defining Parameters for this Request

The Center for Drug Evaluation and Research (CDER) has requested execution of the Cohort Identification and Descriptive Analysis (CIDA) tool 12.1.2 to characterize pediatric a) beta blocker users and b) beta blocker users who go on to have a hypoglycemic event in the Sentinel Distributed Database (SDD).

Query period: 01/01/2008 - Most Recent Available Data
Coverage requirement: Medical & Drug Coverage
Pre-index enrollment requirement: 183 days (for patients > 6 months), since birth (for patients < 6 months)
Post-index enrollment requirement: N/A
Post-episode enrollment requirement for Type 2 analyses: N/A
Enrollment gap: 45
Age groups: 0-1, 2-5, 6-12, 13-17
Stratifications: Age group, Sex, Calendar year
Censor output categorization: N/A
Restrictions: None
Distribution of index-defining codes: Y

Exposure

Scenario	Index Exposure	Cohort definition	Incident exposure washout period	Incident w/ respect to:	Exclude evidence of days supply if exposure washout includes dispensings	Treatment episode gap	Exposure episode extension	Minimum exposure episode duration	Minimum days supplied	Create Baseline Table?	Censor treatment episode (end follow-up time) at evidence of:
1	Metoprolol Extended Release, Metoprolol Regular, Propranolol Extended Release, Propranolol Regular, Propranolol Hemangeol, Atenolol, Nadolol, Labetalol, Carvedilol	All valid exposure episodes during query period	183	Beta Blockers	Washout lookback period should search for evidence of days supply	50% of prior dispensing's days supplied	50% of prior dispensing's days supplied	1	1	Yes	Death; DP end date; Query end date; Disenrollment; End of Treatment Episode; Hypoglycemia Event

Appendix G. Specifications Defining Parameters for this Request											
The Center for Drug Evaluation and Research (CDER) has requested execution of the Cohort Identification and Descriptive Analysis (CIDA) tool 12.1.2 to characterize pediatric a) beta blocker users and b) beta blocker users who go on to have a hypoglycemic event in the Sentinel Distributed Database (SDD).											
2	Metoprolol Extended Release, Metoprolol Regular	All valid exposure episodes during query period	183	Beta Blockers	Washout lookback period should search for evidence of days supply	50% of prior dispensing's days supplied	50% of prior dispensing's days supplied	1	1	Yes	Death; DP end date; Query end date; Disenrollment; End of Treatment Episode; Hypoglycemia Event
3	Propranolol Extended Release, Propranolol Regular, Propranolol Hemangeol	All valid exposure episodes during query period	183	Beta Blockers	Washout lookback period should search for evidence of days supply	50% of prior dispensing's days supplied	50% of prior dispensing's days supplied	1	1	Yes	Death; DP end date; Query end date; Disenrollment; End of Treatment Episode; Hypoglycemia Event
4	Metoprolol Extended Release	All valid exposure episodes during query period	183	Beta Blockers	Washout lookback period should search for evidence of days supply	50% of prior dispensing's days supplied	50% of prior dispensing's days supplied	1	1	Yes	Death; DP end date; Query end date; Disenrollment; End of Treatment Episode; Hypoglycemia Event; Use of non-index beta blocker

Appendix G. Specifications Defining Parameters for this Request

The Center for Drug Evaluation and Research (CDER) has requested execution of the Cohort Identification and Descriptive Analysis (CIDA) tool 12.1.2 to characterize pediatric a) beta blocker users and b) beta blocker users who go on to have a hypoglycemic event in the Sentinel Distributed Database (SDD).

5	Metoprolol Regular	All valid exposure episodes during query period	183	Beta Blockers	Washout lookback period should search for evidence of days supply	50% of prior dispensing's days supplied	50% of prior dispensing's days supplied	1	1	Yes	Death; DP end date; Query end date; Disenrollment; End of Treatment Episode; Hypoglycemia Event; Use of non-index beta blocker
6	Propranolol Extended Release	All valid exposure episodes during query period	183	Beta Blockers	Washout lookback period should search for evidence of days supply	50% of prior dispensing's days supplied	50% of prior dispensing's days supplied	1	1	Yes	Death; DP end date; Query end date; Disenrollment; End of Treatment Episode; Hypoglycemia Event; Use of non-index beta blocker
7	Propranolol Regular	All valid exposure episodes during query period	183	Beta Blockers	Washout lookback period should search for evidence of days supply	50% of prior dispensing's days supplied	50% of prior dispensing's days supplied	1	1	Yes	Death; DP end date; Query end date; Disenrollment; End of Treatment Episode; Hypoglycemia Event; Use of non-index beta blocker

Appendix G. Specifications Defining Parameters for this Request											
The Center for Drug Evaluation and Research (CDER) has requested execution of the Cohort Identification and Descriptive Analysis (CIDA) tool 12.1.2 to characterize pediatric a) beta blocker users and b) beta blocker users who go on to have a hypoglycemic event in the Sentinel Distributed Database (SDD).											
8	Propranolol Hemangeol	All valid exposure episodes during query period	183	Beta Blockers	Washout lookback period should search for evidence of days supply	50% of prior dispensing' s days supplied	50% of prior dispensing' s days supplied	1	1	Yes	Death; DP end date; Query end date; Disenrollment; End of Treatment Episode; Hypoglycemia Event; Use of non-index beta blocker
9	Atenolol	All valid exposure episodes during query period	183	Beta Blockers	Washout lookback period should search for evidence of days supply	50% of prior dispensing' s days supplied	50% of prior dispensing' s days supplied	1	1	Yes	Death; DP end date; Query end date; Disenrollment; End of Treatment Episode; Hypoglycemia Event; Use of non-index beta blocker
10	Nadolol	All valid exposure episodes during query period	183	Beta Blockers	Washout lookback period should search for evidence of days supply	50% of prior dispensing' s days supplied	50% of prior dispensing' s days supplied	1	1	Yes	Death; DP end date; Query end date; Disenrollment; End of Treatment Episode; Hypoglycemia Event; Use of non-index beta blocker

Appendix G. Specifications Defining Parameters for this Request

The Center for Drug Evaluation and Research (CDER) has requested execution of the Cohort Identification and Descriptive Analysis (CIDA) tool 12.1.2 to characterize pediatric a) beta blocker users and b) beta blocker users who go on to have a hypoglycemic event in the Sentinel Distributed Database (SDD).

11	Labetalol	All valid exposure episodes during query period	183	Beta Blockers	Washout lookback period should search for evidence of days supply	50% of prior dispensing's days supplied	50% of prior dispensing's days supplied	1	1	Yes	Death; DP end date; Query end date; Disenrollment; End of Treatment Episode; Hypoglycemia Event; Use of non-index beta blocker
12	Carvedilol	All valid exposure episodes during query period	183	Beta Blockers	Washout lookback period should search for evidence of days supply	50% of prior dispensing's days supplied	50% of prior dispensing's days supplied	1	1	Yes	Death; DP end date; Query end date; Disenrollment; End of Treatment Episode; Hypoglycemia Event; Use of non-index beta blocker

ICD-9, ICD-10, HCPCS, and CPT codes are provided by Optum360.
NDC codes are checked against First Data Bank's FDB MedKnowledge®.

Appendix G. Specifications Defining Parameters for this Request

The Center for Drug Evaluation and Research (CDER) has requested execution of the Cohort Identification and Descriptive Analysis (CIDA) tool 12.1.2 to characterize pediatric a) beta blocker users and b) beta blocker users who go on to have a hypoglycemic event in the Sentinel Distributed Database (SDD).

Scenario	Inclusion/Exclusion Criteria								Event Outcome		
	Inclusion/ Exclusion group	Criteria	Care setting	Evaluation period start	Evaluation period end	Exclude evidence of days supply if inclusion/exclusion evaluation period includes dispensings	Number of instances the criteria should be	Minimum Days Supplied	Event	Care setting	Event de-duplication
1	Acebutolol, Betaxolol, Nebivolol, Pindolol, Sotalol, Timolol	Exclusion	Any care setting	-183	-1	Evaluation period should search for evidence of days supply	1	1	Hypoglycemia	Any	De-duplicates occurrences of the same event code and code type on the same day
2	Acebutolol, Betaxolol, Nebivolol, Pindolol, Sotalol, Timolol, Propranolol Extended Release, Propranolol Regular, Propranolol Hemangeol, Atenolol, Nadolol, Labetalol, Carvedilol	Exclusion	Any care setting	-183	-1	Evaluation period should search for evidence of days supply	1	1	Hypoglycemia	Any	De-duplicates occurrences of the same event code and code type on the same day

Appendix G. Specifications Defining Parameters for this Request

The Center for Drug Evaluation and Research (CDER) has requested execution of the Cohort Identification and Descriptive Analysis (CIDA) tool 12.1.2 to characterize pediatric a) beta blocker users and b) beta blocker users who go on to have a hypoglycemic event in the Sentinel Distributed Database (SDD).

3	Acebutolol, Betaxolol, Nebivolol, Pindolol, Sotalol, Timolol, Metoprolol Extended Release, Metoprolol Regular, Atenolol, Nadolol, Labetalol, Carvedilol	Exclusion	Any care setting	-183	-1	Evaluation period should search for evidence of days supply	1	1	Hypoglyce mia	Any	De-duplicates occurrences of the same event code and code type on the same day
4	Acebutolol, Betaxolol, Nebivolol, Pindolol, Sotalol, Timolol, Metoprolol Regular, Propranolol Extended Release, Propranolol Regular, Propranolol Hemangeol, Atenolol, Nadolol, Labetalol, Carvedilol	Exclusion	Any care setting	-183	-1	Evaluation period should search for evidence of days supply	1	1	Hypoglyce mia	Any	De-duplicates occurrences of the same event code and code type on the same day
5	Acebutolol, Betaxolol, Nebivolol, Pindolol, Sotalol, Timolol, Metoprolol Extended Release, Propranolol Extended Release, Propranolol Regular, Propranolol Hemangeol, Atenolol, Nadolol, Labetalol,	Exclusion	Any care setting	-183	-1	Evaluation period should search for evidence of days supply	1	1	Hypoglyce mia	Any	De-duplicates occurrences of the same event code and code type on the same day

Appendix G. Specifications Defining Parameters for this Request

The Center for Drug Evaluation and Research (CDER) has requested execution of the Cohort Identification and Descriptive Analysis (CIDA) tool 12.1.2 to characterize pediatric a) beta blocker users and b) beta blocker users who go on to have a hypoglycemic event in the Sentinel Distributed Database (SDD).

6	Acebutolol, Betaxolol, Nebivolol, Pindolol, Sotalol, Timolol, Metoprolol Extended Release, Metoprolol Regular, Propranolol Regular, Propranolol Hemangeol, Atenolol, Nadolol, Labetalol, Carvedilol	Exclusion	Any care setting	-183	-1	Evaluation period should search for evidence of days supply	1	1	Hypoglyce mia	Any	De-duplicates occurrences of the same event code and code type on the same day
7	Acebutolol, Betaxolol, Nebivolol, Pindolol, Sotalol, Timolol, Metoprolol Extended Release, Metoprolol Regular, Propranolol Extended Release, Propranolol Hemangeol, Atenolol, Nadolol, Labetalol, Carvedilol	Exclusion	Any care setting	-183	-1	Evaluation period should search for evidence of days supply	1	1	Hypoglyce mia	Any	De-duplicates occurrences of the same event code and code type on the same day

Appendix G. Specifications Defining Parameters for this Request

The Center for Drug Evaluation and Research (CDER) has requested execution of the Cohort Identification and Descriptive Analysis (CIDA) tool 12.1.2 to characterize pediatric a) beta blocker users and b) beta blocker users who go on to have a hypoglycemic event in the Sentinel Distributed Database (SDD).

8	Acebutolol, Betaxolol, Nebivolol, Pindolol, Sotalol, Timolol, Metoprolol Extended Release, Metoprolol Regular, Propranolol Extended Release, Propranolol Regular, Atenolol, Nadolol,	Exclusion	Any care setting	-183	-1	Evaluation period should search for evidence of days supply	1	1	Hypoglyce mia	Any	De-duplicates occurrences of the same event code and code type on the same day
9	Acebutolol, Betaxolol, Nebivolol, Pindolol, Sotalol, Timolol, Metoprolol Extended Release, Metoprolol Regular, Propranolol Extended Release, Propranolol Regular, Propranolol Hemangeol, Nadolol,	Exclusion	Any care setting	-183	-1	Evaluation period should search for evidence of days supply	1	1	Hypoglyce mia	Any	De-duplicates occurrences of the same event code and code type on the same day
10	Acebutolol, Betaxolol, Nebivolol, Pindolol, Sotalol, Timolol, Metoprolol Extended Release, Metoprolol Regular, Propranolol Extended Release, Propranolol Regular, Propranolol Hemangeol, Atenolol,	Exclusion	Any care setting	-183	-1	Evaluation period should search for evidence of days supply	1	1	Hypoglyce mia	Any	De-duplicates occurrences of the same event code and code type on the same day

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The Center for Drug Evaluation and Research (CDER) has requested execution of the Cohort Identification and Descriptive Analysis (CIDA) tool 12.1.2 to characterize pediatric a) beta blocker users and b) beta blocker users who go on to have a hypoglycemic event in the Sentinel Distributed Database (SDD).

11	Acebutolol, Betaxolol, Nebivolol, Pindolol, Sotalol, Timolol, Metoprolol Extended Release, Metoprolol Regular, Propranolol Extended Release, Propranolol Regular, Propranolol Hemangeol, Atenolol, Nadolol, Carvedilol	Exclusion	Any care setting	-183	-1	Evaluation period should search for evidence of days supply	1	1	Hypoglyce mia	Any	De-duplicates occurrences of the same event code and code type on the same day
12	Acebutolol, Betaxolol, Nebivolol, Pindolol, Sotalol, Timolol, Metoprolol Extended Release, Metoprolol Regular, Propranolol Extended Release, Propranolol Regular, Propranolol Hemangeol, Atenolol,	Exclusion	Any care setting	-183	-1	Evaluation period should search for evidence of days supply	1	1	Hypoglyce mia	Any	De-duplicates occurrences of the same event code and code type on the same day

ICD-9, ICD-10, HCPCS, and CPT codes are provided by Optum360.
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Appendix H. Design Diagram for this Request

