

MILLIMAN RESEARCH REPORT

A claims-based analysis of sickle cell disease: Supplement

Considerations for commercial and managed Medicaid payers

October 2019

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Commissioned by the Global Blood Therapeutics

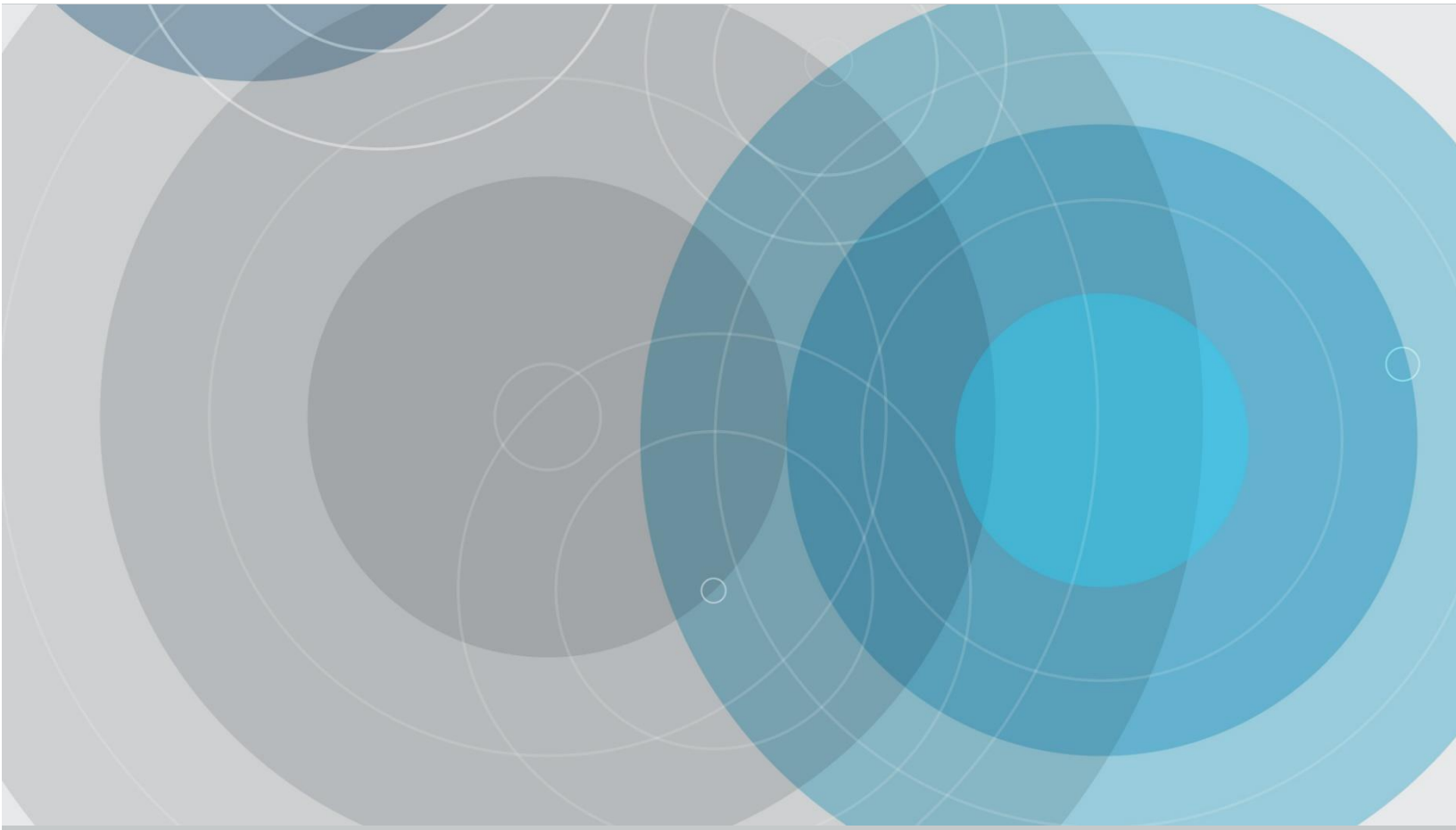




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Appendix A: ICD-10 Inpatient Acute and Chronic Condition Code Lists

A1: ACUTE CHEST SYNDROME

| ICD-10-CM Code | Description |
|----------------|---|
| D5701 | Hb-SS disease with acute chest syndrome |
| D57211 | Sickle-cell/Hb-C disease with acute chest syndrome |
| D57411 | Sickle-cell thalassemia with acute chest syndrome |
| D57811 | Other sickle-cell disorders with acute chest syndrome |

A2: ACUTE CHOLECYSTITIS/CHOLANGITIS

| ICD-10-CM Code | Description |
|----------------|--|
| K8000 | Calculus of gallbladder with acute cholecystitis without obstruction |
| K8001 | Calculus of gallbladder with acute cholecystitis with obstruction |
| K8032 | Calculus of bile duct with acute cholangitis without obstruction |
| K8033 | Calculus of bile duct with acute cholangitis with obstruction |
| K8042 | Calculus of bile duct with acute cholecystitis without obstruction |
| K8043 | Calculus of bile duct with acute cholecystitis with obstruction |
| K8062 | Calculus of gallbladder and bile duct with acute cholecystitis without obstruction |
| K8063 | Calculus of gallbladder and bile duct with acute cholecystitis with obstruction |
| K810 | Acute cholecystitis |
| K812 | Acute cholecystitis with chronic cholecystitis |

A3: ACUTE KIDNEY FAILURE

| ICD-10-CM Code | Description |
|----------------|---|
| N170 | Acute kidney failure with tubular necrosis |
| N171 | Acute kidney failure with acute cortical necrosis |
| N172 | Acute kidney failure with medullary necrosis |
| N178 | Other acute kidney failure |
| N179 | Acute kidney failure, unspecified |
| O904 | Postpartum acute kidney failure |

A4: ACUTE MYOCARDIAL INFARCTION

| ICD-10-CM Code | Description |
|----------------|---|
| I2101 | ST elevation (STEMI) myocardial infarction involving left main coronary artery |
| I2102 | ST elevation (STEMI) myocardial infarction involving left anterior descending coronary artery |
| I2109 | ST elevation (STEMI) myocardial infarction involving other coronary artery of anterior wall |
| I2111 | ST elevation (STEMI) myocardial infarction involving right coronary artery |
| I2119 | ST elevation (STEMI) myocardial infarction involving other coronary artery of inferior wall |
| I2121 | ST elevation (STEMI) myocardial infarction involving left circumflex coronary artery |
| I2129 | ST elevation (STEMI) myocardial infarction involving other sites |
| I213 | ST elevation (STEMI) myocardial infarction of unspecified site |
| I214 | Non-ST elevation (NSTEMI) myocardial infarction |
| I219 | Acute myocardial infarction, unspecified |
| I21A1 | Myocardial infarction type 2 |
| I21A9 | Other myocardial infarction type |
| I220 | Subsequent ST elevation (STEMI) myocardial infarction of anterior wall |
| I221 | Subsequent ST elevation (STEMI) myocardial infarction of inferior wall |
| I222 | Subsequent non-ST elevation (NSTEMI) myocardial infarction |
| I228 | Subsequent ST elevation (STEMI) myocardial infarction of other sites |
| I229 | Subsequent ST elevation (STEMI) myocardial infarction of unspecified site |
| I240 | Acute coronary thrombosis not resulting in myocardial infarction |

A5: PNEUMONIA

| ICD-10-CM Code | Description |
|----------------|---|
| A0103 | Typhoid pneumonia |
| A0222 | Salmonella pneumonia |
| A3701 | Whooping cough due to Bordetella pertussis with pneumonia |
| A3711 | Whooping cough due to Bordetella parapertussis with pneumonia |
| A3781 | Whooping cough due to other Bordetella species with pneumonia |
| A3791 | Whooping cough, unspecified species with pneumonia |
| A403 | Sepsis due to Streptococcus pneumoniae |
| A5004 | Early congenital syphilitic pneumonia |
| A5484 | Gonococcal pneumonia |
| B012 | Varicella pneumonia |
| B052 | Measles complicated by pneumonia |
| B0681 | Rubella pneumonia |
| B7781 | Ascariasis pneumonia |
| B953 | Streptococcus pneumoniae as the cause of diseases classified elsewhere |
| B960 | Mycoplasma pneumoniae [M. pneumoniae] as the cause of diseases classified elsewhere |
| B961 | Klebsiella pneumoniae [K. pneumoniae] as the cause of diseases classified elsewhere |

| | |
|--------|--|
| J09X1 | Influenza due to identified novel influenza A virus with pneumonia |
| J1000 | Influenza due to other identified influenza virus with unspecified type of pneumonia |
| J1001 | Influenza due to other identified influenza virus with the same other identified influenza virus pneumonia |
| J1008 | Influenza due to other identified influenza virus with other specified pneumonia |
| J1100 | Influenza due to unidentified influenza virus with unspecified type of pneumonia |
| J1108 | Influenza due to unidentified influenza virus with specified pneumonia |
| J120 | Adenoviral pneumonia |
| J121 | Respiratory syncytial virus pneumonia |
| J122 | Parainfluenza virus pneumonia |
| J123 | Human metapneumovirus pneumonia |
| J1281 | Pneumonia due to SARS-associated coronavirus |
| J1289 | Other viral pneumonia |
| J129 | Viral pneumonia, unspecified |
| J13 | Pneumonia due to Streptococcus pneumoniae |
| J14 | Pneumonia due to Hemophilus influenzae |
| J150 | Pneumonia due to Klebsiella pneumoniae |
| J151 | Pneumonia due to Pseudomonas |
| J1520 | Pneumonia due to staphylococcus, unspecified |
| J15211 | Pneumonia due to Methicillin susceptible Staphylococcus aureus |
| J15212 | Pneumonia due to Methicillin resistant Staphylococcus aureus |
| J1529 | Pneumonia due to other staphylococcus |
| J153 | Pneumonia due to streptococcus, group B |
| J154 | Pneumonia due to other streptococci |
| J155 | Pneumonia due to Escherichia coli |
| J156 | Pneumonia due to other Gram-negative bacteria |
| J157 | Pneumonia due to Mycoplasma pneumoniae |
| J158 | Pneumonia due to other specified bacteria |
| J159 | Unspecified bacterial pneumonia |
| J160 | Chlamydial pneumonia |
| J168 | Pneumonia due to other specified infectious organisms |
| J17 | Pneumonia in diseases classified elsewhere |
| J180 | Bronchopneumonia, unspecified organism |
| J181 | Lobar pneumonia, unspecified organism |
| J182 | Hypostatic pneumonia, unspecified organism |
| J188 | Other pneumonia, unspecified organism |
| J189 | Pneumonia, unspecified organism |
| J200 | Acute bronchitis due to Mycoplasma pneumoniae |
| J84111 | Idiopathic interstitial pneumonia, not otherwise specified |
| J84116 | Cryptogenic organizing pneumonia |
| J84117 | Desquamative interstitial pneumonia |

| | |
|------|--|
| J842 | Lymphoid interstitial pneumonia |
| J851 | Abscess of lung with pneumonia |
| P230 | Congenital pneumonia due to viral agent |
| P231 | Congenital pneumonia due to Chlamydia |
| P232 | Congenital pneumonia due to staphylococcus |
| P233 | Congenital pneumonia due to streptococcus, group B |
| P234 | Congenital pneumonia due to Escherichia coli |
| P235 | Congenital pneumonia due to Pseudomonas |
| P236 | Congenital pneumonia due to other bacterial agents |
| P238 | Congenital pneumonia due to other organisms |
| P239 | Congenital pneumonia, unspecified |

A6: SEPSIS

| ICD-10-CM Code | Description |
|----------------|---|
| A021 | Salmonella sepsis |
| A227 | Anthrax sepsis |
| A267 | Erysipelothrix sepsis |
| A327 | Listerial sepsis |
| A400 | Sepsis due to streptococcus, group A |
| A401 | Sepsis due to streptococcus, group B |
| A403 | Sepsis due to Streptococcus pneumoniae |
| A408 | Other streptococcal sepsis |
| A409 | Streptococcal sepsis, unspecified |
| A4101 | Sepsis due to Methicillin susceptible Staphylococcus aureus |
| A4102 | Sepsis due to Methicillin resistant Staphylococcus aureus |
| A411 | Sepsis due to other specified staphylococcus |
| A412 | Sepsis due to unspecified staphylococcus |
| A413 | Sepsis due to Hemophilus influenzae |
| A414 | Sepsis due to anaerobes |
| A4150 | Gram-negative sepsis, unspecified |
| A4151 | Sepsis due to Escherichia coli [E. coli] |
| A4152 | Sepsis due to Pseudomonas |
| A4153 | Sepsis due to Serratia |
| A4159 | Other Gram-negative sepsis |
| A4181 | Sepsis due to Enterococcus |
| A4189 | Other specified sepsis |
| A419 | Sepsis, unspecified organism |
| A427 | Actinomycotic sepsis |
| A5486 | Gonococcal sepsis |

| | |
|---------|---|
| B377 | Candidal sepsis |
| O0337 | Sepsis following incomplete spontaneous abortion |
| O0387 | Sepsis following complete or unspecified spontaneous abortion |
| O0487 | Sepsis following (induced) termination of pregnancy |
| O0737 | Sepsis following failed attempted termination of pregnancy |
| O0882 | Sepsis following ectopic and molar pregnancy |
| O85 | Puerperal sepsis |
| O8604 | Sepsis following an obstetrical procedure |
| P360 | Sepsis of newborn due to streptococcus, group B |
| P3610 | Sepsis of newborn due to unspecified streptococci |
| P3619 | Sepsis of newborn due to other streptococci |
| P362 | Sepsis of newborn due to Staphylococcus aureus |
| P3630 | Sepsis of newborn due to unspecified staphylococci |
| P3639 | Sepsis of newborn due to other staphylococci |
| P364 | Sepsis of newborn due to Escherichia coli |
| P365 | Sepsis of newborn due to anaerobes |
| P368 | Other bacterial sepsis of newborn |
| P369 | Bacterial sepsis of newborn, unspecified |
| R6520 | Severe sepsis without septic shock |
| R6521 | Severe sepsis with septic shock |
| T8144XA | Sepsis following a procedure, initial encounter |
| T8144XD | Sepsis following a procedure, subsequent encounter |
| T8144XS | Sepsis following a procedure, sequela |

A7: SPLENIC SEQUESTRATION

| ICD-10-CM Code | Description |
|----------------|--|
| D5702 | Hb-SS disease with splenic sequestration |
| D57212 | Sickle-cell/Hb-C disease with splenic sequestration |
| D57412 | Sickle-cell thalassemia with splenic sequestration |
| D57812 | Other sickle-cell disorders with splenic sequestration |

A8: STROKE

| ICD-10-CM Code | Description |
|----------------|--|
| G43601 | Persistent migraine aura with cerebral infarction, not intractable, with status migrainosus |
| G43609 | Persistent migraine aura with cerebral infarction, not intractable, without status migrainosus |
| G43611 | Persistent migraine aura with cerebral infarction, intractable, with status migrainosus |
| G43619 | Persistent migraine aura with cerebral infarction, intractable, without status migrainosus |
| I6300 | Cerebral infarction due to thrombosis of unspecified precerebral artery |

| | |
|--------|--|
| I63011 | Cerebral infarction due to thrombosis of right vertebral artery |
| I63012 | Cerebral infarction due to thrombosis of left vertebral artery |
| I63013 | Cerebral infarction due to thrombosis of bilateral vertebral arteries |
| I63019 | Cerebral infarction due to thrombosis of unspecified vertebral artery |
| I6302 | Cerebral infarction due to thrombosis of basilar artery |
| I63031 | Cerebral infarction due to thrombosis of right carotid artery |
| I63032 | Cerebral infarction due to thrombosis of left carotid artery |
| I63033 | Cerebral infarction due to thrombosis of bilateral carotid arteries |
| I63039 | Cerebral infarction due to thrombosis of unspecified carotid artery |
| I6309 | Cerebral infarction due to thrombosis of other precerebral artery |
| I6310 | Cerebral infarction due to embolism of unspecified precerebral artery |
| I63111 | Cerebral infarction due to embolism of right vertebral artery |
| I63112 | Cerebral infarction due to embolism of left vertebral artery |
| I63113 | Cerebral infarction due to embolism of bilateral vertebral arteries |
| I63119 | Cerebral infarction due to embolism of unspecified vertebral artery |
| I6312 | Cerebral infarction due to embolism of basilar artery |
| I63131 | Cerebral infarction due to embolism of right carotid artery |
| I63132 | Cerebral infarction due to embolism of left carotid artery |
| I63133 | Cerebral infarction due to embolism of bilateral carotid arteries |
| I63139 | Cerebral infarction due to embolism of unspecified carotid artery |
| I6319 | Cerebral infarction due to embolism of other precerebral artery |
| I6320 | Cerebral infarction due to unspecified occlusion or stenosis of unspecified precerebral arteries |
| I63211 | Cerebral infarction due to unspecified occlusion or stenosis of right vertebral artery |
| I63212 | Cerebral infarction due to unspecified occlusion or stenosis of left vertebral artery |
| I63213 | Cerebral infarction due to unspecified occlusion or stenosis of bilateral vertebral arteries |
| I63219 | Cerebral infarction due to unspecified occlusion or stenosis of unspecified vertebral artery |
| I6322 | Cerebral infarction due to unspecified occlusion or stenosis of basilar artery |
| I63231 | Cerebral infarction due to unspecified occlusion or stenosis of right carotid arteries |
| I63232 | Cerebral infarction due to unspecified occlusion or stenosis of left carotid arteries |
| I63233 | Cerebral infarction due to unspecified occlusion or stenosis of bilateral carotid arteries |
| I63239 | Cerebral infarction due to unspecified occlusion or stenosis of unspecified carotid artery |
| I6329 | Cerebral infarction due to unspecified occlusion or stenosis of other precerebral arteries |
| I6330 | Cerebral infarction due to thrombosis of unspecified cerebral artery |
| I63311 | Cerebral infarction due to thrombosis of right middle cerebral artery |
| I63312 | Cerebral infarction due to thrombosis of left middle cerebral artery |
| I63313 | Cerebral infarction due to thrombosis of bilateral middle cerebral arteries |
| I63319 | Cerebral infarction due to thrombosis of unspecified middle cerebral artery |
| I63321 | Cerebral infarction due to thrombosis of right anterior cerebral artery |
| I63322 | Cerebral infarction due to thrombosis of left anterior cerebral artery |
| I63323 | Cerebral infarction due to thrombosis of bilateral anterior cerebral arteries |
| I63329 | Cerebral infarction due to thrombosis of unspecified anterior cerebral artery |

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|--------|---|
| I63331 | Cerebral infarction due to thrombosis of right posterior cerebral artery |
| I63332 | Cerebral infarction due to thrombosis of left posterior cerebral artery |
| I63333 | Cerebral infarction due to thrombosis of bilateral posterior cerebral arteries |
| I63339 | Cerebral infarction due to thrombosis of unspecified posterior cerebral artery |
| I63341 | Cerebral infarction due to thrombosis of right cerebellar artery |
| I63342 | Cerebral infarction due to thrombosis of left cerebellar artery |
| I63343 | Cerebral infarction due to thrombosis of bilateral cerebellar arteries |
| I63349 | Cerebral infarction due to thrombosis of unspecified cerebellar artery |
| I6339 | Cerebral infarction due to thrombosis of other cerebral artery |
| I6340 | Cerebral infarction due to embolism of unspecified cerebral artery |
| I63411 | Cerebral infarction due to embolism of right middle cerebral artery |
| I63412 | Cerebral infarction due to embolism of left middle cerebral artery |
| I63413 | Cerebral infarction due to embolism of bilateral middle cerebral arteries |
| I63419 | Cerebral infarction due to embolism of unspecified middle cerebral artery |
| I63421 | Cerebral infarction due to embolism of right anterior cerebral artery |
| I63422 | Cerebral infarction due to embolism of left anterior cerebral artery |
| I63423 | Cerebral infarction due to embolism of bilateral anterior cerebral arteries |
| I63429 | Cerebral infarction due to embolism of unspecified anterior cerebral artery |
| I63431 | Cerebral infarction due to embolism of right posterior cerebral artery |
| I63432 | Cerebral infarction due to embolism of left posterior cerebral artery |
| I63433 | Cerebral infarction due to embolism of bilateral posterior cerebral arteries |
| I63439 | Cerebral infarction due to embolism of unspecified posterior cerebral artery |
| I63441 | Cerebral infarction due to embolism of right cerebellar artery |
| I63442 | Cerebral infarction due to embolism of left cerebellar artery |
| I63443 | Cerebral infarction due to embolism of bilateral cerebellar arteries |
| I63449 | Cerebral infarction due to embolism of unspecified cerebellar artery |
| I6349 | Cerebral infarction due to embolism of other cerebral artery |
| I6350 | Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebral artery |
| I63511 | Cerebral infarction due to unspecified occlusion or stenosis of right middle cerebral artery |
| I63512 | Cerebral infarction due to unspecified occlusion or stenosis of left middle cerebral artery |
| I63513 | Cerebral infarction due to unspecified occlusion or stenosis of bilateral middle cerebral arteries |
| I63519 | Cerebral infarction due to unspecified occlusion or stenosis of unspecified middle cerebral artery |
| I63521 | Cerebral infarction due to unspecified occlusion or stenosis of right anterior cerebral artery |
| I63522 | Cerebral infarction due to unspecified occlusion or stenosis of left anterior cerebral artery |
| I63523 | Cerebral infarction due to unspecified occlusion or stenosis of bilateral anterior cerebral arteries |
| I63529 | Cerebral infarction due to unspecified occlusion or stenosis of unspecified anterior cerebral artery |
| I63531 | Cerebral infarction due to unspecified occlusion or stenosis of right posterior cerebral artery |
| I63532 | Cerebral infarction due to unspecified occlusion or stenosis of left posterior cerebral artery |
| I63533 | Cerebral infarction due to unspecified occlusion or stenosis of bilateral posterior cerebral arteries |
| I63539 | Cerebral infarction due to unspecified occlusion or stenosis of unspecified posterior cerebral artery |
| I63541 | Cerebral infarction due to unspecified occlusion or stenosis of right cerebellar artery |

| | |
|--------|---|
| I63542 | Cerebral infarction due to unspecified occlusion or stenosis of left cerebellar artery |
| I63543 | Cerebral infarction due to unspecified occlusion or stenosis of bilateral cerebellar arteries |
| I63549 | Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebellar artery |
| I6359 | Cerebral infarction due to unspecified occlusion or stenosis of other cerebral artery |
| I636 | Cerebral infarction due to cerebral venous thrombosis, nonpyogenic |
| I638 | Other cerebral infarction |
| I6381 | Other cerebral infarction due to occlusion or stenosis of small artery |
| I6389 | Other cerebral infarction |
| I639 | Cerebral infarction, unspecified |
| I610 | Nontraumatic intracerebral hemorrhage in hemisphere, subcortical |
| I611 | Nontraumatic intracerebral hemorrhage in hemisphere, cortical |
| I612 | Nontraumatic intracerebral hemorrhage in hemisphere, unspecified |
| I613 | Nontraumatic intracerebral hemorrhage in brain stem |
| I614 | Nontraumatic intracerebral hemorrhage in cerebellum |
| I615 | Nontraumatic intracerebral hemorrhage, intraventricular |
| I616 | Nontraumatic intracerebral hemorrhage, multiple localized |
| I618 | Other nontraumatic intracerebral hemorrhage |
| I619 | Nontraumatic intracerebral hemorrhage, unspecified |

A9: THROMBOPHLEBITIS

| ICD-10-CM Code | Description |
|----------------|--|
| G08 | Intracranial and intraspinal phlebitis and thrombophlebitis |
| I8000 | Phlebitis and thrombophlebitis of superficial vessels of unspecified lower extremity |
| I8001 | Phlebitis and thrombophlebitis of superficial vessels of right lower extremity |
| I8002 | Phlebitis and thrombophlebitis of superficial vessels of left lower extremity |
| I8003 | Phlebitis and thrombophlebitis of superficial vessels of lower extremities, bilateral |
| I8010 | Phlebitis and thrombophlebitis of unspecified femoral vein |
| I8011 | Phlebitis and thrombophlebitis of right femoral vein |
| I8012 | Phlebitis and thrombophlebitis of left femoral vein |
| I8013 | Phlebitis and thrombophlebitis of femoral vein, bilateral |
| I80201 | Phlebitis and thrombophlebitis of unspecified deep vessels of right lower extremity |
| I80202 | Phlebitis and thrombophlebitis of unspecified deep vessels of left lower extremity |
| I80203 | Phlebitis and thrombophlebitis of unspecified deep vessels of lower extremities, bilateral |
| I80209 | Phlebitis and thrombophlebitis of unspecified deep vessels of unspecified lower extremity |
| I80211 | Phlebitis and thrombophlebitis of right iliac vein |
| I80212 | Phlebitis and thrombophlebitis of left iliac vein |
| I80213 | Phlebitis and thrombophlebitis of iliac vein, bilateral |
| I80219 | Phlebitis and thrombophlebitis of unspecified iliac vein |
| I80221 | Phlebitis and thrombophlebitis of right popliteal vein |

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| I80222 | Phlebitis and thrombophlebitis of left popliteal vein |
| I80223 | Phlebitis and thrombophlebitis of popliteal vein, bilateral |
| I80229 | Phlebitis and thrombophlebitis of unspecified popliteal vein |
| I80231 | Phlebitis and thrombophlebitis of right tibial vein |
| I80232 | Phlebitis and thrombophlebitis of left tibial vein |
| I80233 | Phlebitis and thrombophlebitis of tibial vein, bilateral |
| I80239 | Phlebitis and thrombophlebitis of unspecified tibial vein |
| I80291 | Phlebitis and thrombophlebitis of other deep vessels of right lower extremity |
| I80292 | Phlebitis and thrombophlebitis of other deep vessels of left lower extremity |
| I80293 | Phlebitis and thrombophlebitis of other deep vessels of lower extremity, bilateral |
| I80299 | Phlebitis and thrombophlebitis of other deep vessels of unspecified lower extremity |
| I803 | Phlebitis and thrombophlebitis of lower extremities, unspecified |
| I808 | Phlebitis and thrombophlebitis of other sites |
| I809 | Phlebitis and thrombophlebitis of unspecified site |
| I821 | Thrombophlebitis migrans |
| O2220 | Superficial thrombophlebitis in pregnancy, unspecified trimester |
| O2221 | Superficial thrombophlebitis in pregnancy, first trimester |
| O2222 | Superficial thrombophlebitis in pregnancy, second trimester |
| O2223 | Superficial thrombophlebitis in pregnancy, third trimester |
| O8681 | Puerperal septic thrombophlebitis |
| O870 | Superficial thrombophlebitis in the puerperium |

A10: UNSPECIFIED CRISIS

| ICD-10-CM Code | Description |
|----------------|--|
| D5700 | Hb-SS disease with crisis, unspecified |
| D57219 | Sickle-cell/Hb-C disease with crisis, unspecified |
| D57419 | Sickle-cell thalassemia with crisis, unspecified |
| D57819 | Other sickle-cell disorders with crisis, unspecified |

A11: ASTHMA

| ICD-10-CM Code | Descriptor |
|----------------|--|
| J4520 | Mild intermittent asthma, uncomplicated |
| J4521 | Mild intermittent asthma with (acute) exacerbation |
| J4522 | Mild intermittent asthma with status asthmaticus |
| J4530 | Mild persistent asthma, uncomplicated |
| J4531 | Mild persistent asthma with (acute) exacerbation |
| J4532 | Mild persistent asthma with status asthmaticus |
| J4540 | Moderate persistent asthma, uncomplicated |
| J4541 | Moderate persistent asthma with (acute) exacerbation |
| J4542 | Moderate persistent asthma with status asthmaticus |
| J4550 | Severe persistent asthma, uncomplicated |
| J4551 | Severe persistent asthma with (acute) exacerbation |
| J4552 | Severe persistent asthma with status asthmaticus |
| J45901 | Unspecified asthma with (acute) exacerbation |
| J45902 | Unspecified asthma with status asthmaticus |
| J45909 | Unspecified asthma, uncomplicated |
| J45990 | Exercise induced bronchospasm |
| J45991 | Cough variant asthma |
| J45998 | Other asthma |

A12: BLINDNESS/LOW VISION

| ICD-10-CM Code | Descriptor |
|----------------|--|
| H540 | Blindness, both eyes |
| H540X33 | Blindness right eye category 3, blindness left eye category 3 |
| H540X34 | Blindness right eye category 3, blindness left eye category 4 |
| H540X35 | Blindness right eye category 3, blindness left eye category 5 |
| H540X43 | Blindness right eye category 4, blindness left eye category 3 |
| H540X44 | Blindness right eye category 4, blindness left eye category 4 |
| H540X45 | Blindness right eye category 4, blindness left eye category 5 |
| H540X53 | Blindness right eye category 5, blindness left eye category 3 |
| H540X54 | Blindness right eye category 5, blindness left eye category 4 |
| H540X55 | Blindness right eye category 5, blindness left eye category 5 |
| H5410 | Blindness, one eye, low vision other eye, unspecified eyes |
| H5411 | Blindness, right eye, low vision left eye |
| H541131 | Blindness right eye category 3, low vision left eye category 1 |
| H541132 | Blindness right eye category 3, low vision left eye category 2 |
| H541141 | Blindness right eye category 4, low vision left eye category 1 |
| H541142 | Blindness right eye category 4, low vision left eye category 2 |

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| H541151 | Blindness right eye category 5, low vision left eye category 1 |
| H541152 | Blindness right eye category 5, low vision left eye category 2 |
| H5412 | Blindness, left eye, low vision right eye |
| H541213 | Low vision right eye category 1, blindness left eye category 3 |
| H541214 | Low vision right eye category 1, blindness left eye category 4 |
| H541215 | Low vision right eye category 1, blindness left eye category 5 |
| H541223 | Low vision right eye category 2, blindness left eye category 3 |
| H541224 | Low vision right eye category 2, blindness left eye category 4 |
| H541225 | Low vision right eye category 2, blindness left eye category 5 |
| H542 | Low vision, both eyes |
| H542X11 | Low vision right eye category 1, low vision left eye category 1 |
| H542X12 | Low vision right eye category 1, low vision left eye category 2 |
| H542X21 | Low vision right eye category 2, low vision left eye category 1 |
| H542X22 | Low vision right eye category 2, low vision left eye category 2 |
| H543 | Unqualified visual loss, both eyes |
| H5440 | Blindness, one eye, unspecified eye |
| H5441 | Blindness, right eye, normal vision left eye |
| H54413A | Blindness right eye category 3, normal vision left eye |
| H54414A | Blindness right eye category 4, normal vision left eye |
| H54415A | Blindness right eye category 5, normal vision left eye |
| H5442 | Blindness, left eye, normal vision right eye |
| H5442A3 | Blindness left eye category 3, normal vision right eye |
| H5442A4 | Blindness left eye category 4, normal vision right eye |
| H5442A5 | Blindness left eye category 5, normal vision right eye |
| H5450 | Low vision, one eye, unspecified eye |
| H5451 | Low vision, right eye, normal vision left eye |
| H54511A | Low vision right eye category 1, normal vision left eye |
| H54512A | Low vision right eye category 2, normal vision left eye |
| H5452 | Low vision, left eye, normal vision right eye |
| H5452A1 | Low vision left eye category 1, normal vision right eye |
| H5452A2 | Low vision left eye category 2, normal vision right eye |
| H5460 | Unqualified visual loss, one eye, unspecified |
| H5461 | Unqualified visual loss, right eye, normal vision left eye |
| H5462 | Unqualified visual loss, left eye, normal vision right eye |
| H547 | Unspecified visual loss |
| H548 | Legal blindness, as defined in USA |

A13: CHRONIC KIDNEY DISEASE

| ICD-10-CM Code | Descriptor |
|-------------------|---|
| E0821 | Diabetes mellitus due to underlying condition with diabetic nephropathy |
| E0822 | Diabetes mellitus due to underlying condition with diabetic chronic kidney disease |
| E0829 | Diabetes mellitus due to underlying condition with other diabetic kidney complication |
| E0921 | Drug or chemical induced diabetes mellitus with diabetic nephropathy |
| E0922 | Drug or chemical induced diabetes mellitus with diabetic chronic kidney disease |
| E0929 | Drug or chemical induced diabetes mellitus with other diabetic kidney complication |
| E1021 | Type 1 diabetes mellitus with diabetic nephropathy |
| E1022 | Type 1 diabetes mellitus with diabetic chronic kidney disease |
| E1029 | Type 1 diabetes mellitus with other diabetic kidney complication |
| E1121 | Type 2 diabetes mellitus with diabetic nephropathy |
| E1122 | Type 2 diabetes mellitus with diabetic chronic kidney disease |
| E1129 | Type 2 diabetes mellitus with other diabetic kidney complication |
| E1321 | Other specified diabetes mellitus with diabetic nephropathy |
| E1322 | Other specified diabetes mellitus with diabetic chronic kidney disease |
| E1329 | Other specified diabetes mellitus with other diabetic kidney complication |
| I120 | Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease |
| I129 | Hypertensive chronic kidney disease with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease |
| I130 | Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease |
| I1310 | Hypertensive heart and chronic kidney disease without heart failure, with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease |
| I1311 | Hypertensive heart and chronic kidney disease without heart failure, with stage 5 chronic kidney disease, or end stage renal disease |
| I132 | Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease |
| K767 | Hepatorenal syndrome |
| M1030 | Gout due to renal impairment, unspecified site |
| M10311 | Gout due to renal impairment, right shoulder |
| M10312 | Gout due to renal impairment, left shoulder |
| M10319 | Gout due to renal impairment, unspecified shoulder |
| M10321 | Gout due to renal impairment, right elbow |
| M10322 | Gout due to renal impairment, left elbow |
| M10329 | Gout due to renal impairment, unspecified elbow |
| M10331 | Gout due to renal impairment, right wrist |
| M10332 | Gout due to renal impairment, left wrist |
| M10339 | Gout due to renal impairment, unspecified wrist |

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| M10341 | Gout due to renal impairment, right hand |
| M10342 | Gout due to renal impairment, left hand |
| M10349 | Gout due to renal impairment, unspecified hand |
| M10351 | Gout due to renal impairment, right hip |
| M10352 | Gout due to renal impairment, left hip |
| M10359 | Gout due to renal impairment, unspecified hip |
| M10361 | Gout due to renal impairment, right knee |
| M10362 | Gout due to renal impairment, left knee |
| M10369 | Gout due to renal impairment, unspecified knee |
| M10371 | Gout due to renal impairment, right ankle and foot |
| M10372 | Gout due to renal impairment, left ankle and foot |
| M10379 | Gout due to renal impairment, unspecified ankle and foot |
| M1038 | Gout due to renal impairment, vertebrae |
| M1039 | Gout due to renal impairment, multiple sites |
| M3214 | Glomerular disease in systemic lupus erythematosus |
| M3215 | Tubulo-interstitial neuropath in sys lupus erythematosus |
| M3504 | Sicca syndrome with tubulo-interstitial nephropathy |
| N000 | Acute nephritic syndrome with minor glomerular abnormality |
| N001 | Acute nephritic syndrome with focal and segmental glomerular lesions |
| N002 | Acute nephritic syndrome with diffuse membranous glomerulonephritis |
| N003 | Acute nephritic syndrome with diffuse mesangial proliferative glomerulonephritis |
| N004 | Acute nephritic syndrome with diffuse endocapillary proliferative glomerulonephritis |
| N005 | Acute nephritic syndrome with diffuse mesangiocapillary glomerulonephritis |
| N006 | Acute nephritic syndrome with dense deposit disease |
| N007 | Acute nephritic syndrome with diffuse crescentic glomerulonephritis |
| N008 | Acute nephritic syndrome with other morphologic changes |
| N009 | Acute nephritic syndrome with unspecified morphologic changes |
| N010 | Rapidly progressive nephritic syndrome with minor glomerular abnormality |
| N011 | Rapidly progressive nephritic syndrome with focal and segmental glomerular lesions |
| N012 | Rapidly progressive nephritic syndrome with diffuse membranous glomerulonephritis |
| N013 | Rapidly progressive nephritic syndrome with diffuse mesangial proliferative glomerulonephritis |
| N014 | Rapidly progressive nephritic syndrome with diffuse endocapillary proliferative glomerulonephritis |
| N015 | Rapidly progressive nephritic syndrome with diffuse mesangiocapillary glomerulonephritis |
| N016 | Rapidly progressive nephritic syndrome with dense deposit disease |
| N017 | Rapidly progressive nephritic syndrome with diffuse crescentic glomerulonephritis |
| N018 | Rapidly progressive nephritic syndrome with other morphologic changes |
| N019 | Rapidly progressive nephritic syndrome with unspecified morphologic changes |
| N020 | Recurrent and persistent hematuria with minor glomerular abnormality |
| N021 | Recurrent and persistent hematuria with focal and segmental glomerular lesions |
| N022 | Recurrent and persistent hematuria with diffuse membranous glomerulonephritis |
| N023 | Recurrent and persistent hematuria with diffuse mesangial proliferative glomerulonephritis |

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| N024 | Recurrent and persistent hematuria with diffuse endocapillary proliferative glomerulonephritis |
| N025 | Recurrent and persistent hematuria with diffuse mesangiocapillary glomerulonephritis |
| N026 | Recurrent and persistent hematuria with dense deposit disease |
| N027 | Recurrent and persistent hematuria with diffuse crescentic glomerulonephritis |
| N028 | Recurrent and persistent hematuria with other morphologic changes |
| N029 | Recurrent and persistent hematuria with unspecified morphologic changes |
| N030 | Chronic nephritic syndrome with minor glomerular abnormality |
| N031 | Chronic nephritic syndrome with focal and segmental glomerular lesions |
| N032 | Chronic nephritic syndrome with diffuse membranous glomerulonephritis |
| N033 | Chronic nephritic syndrome with diffuse mesangial proliferative glomerulonephritis |
| N034 | Chronic nephritic syndrome with diffuse endocapillary proliferative glomerulonephritis |
| N035 | Chronic nephritic syndrome with diffuse mesangiocapillary glomerulonephritis |
| N036 | Chronic nephritic syndrome with dense deposit disease |
| N037 | Chronic nephritic syndrome with diffuse crescentic glomerulonephritis |
| N038 | Chronic nephritic syndrome with other morphologic changes |
| N039 | Chronic nephritic syndrome with unspecified morphologic changes |
| N040 | Nephrotic syndrome with minor glomerular abnormality |
| N041 | Nephrotic syndrome with focal and segmental glomerular lesions |
| N042 | Nephrotic syndrome with diffuse membranous glomerulonephritis |
| N043 | Nephrotic syndrome with diffuse mesangial proliferative glomerulonephritis |
| N044 | Nephrotic syndrome with diffuse endocapillary proliferative glomerulonephritis |
| N045 | Nephrotic syndrome with diffuse mesangiocapillary glomerulonephritis |
| N046 | Nephrotic syndrome with dense deposit disease |
| N047 | Nephrotic syndrome with diffuse crescentic glomerulonephritis |
| N048 | Nephrotic syndrome with other morphologic changes |
| N049 | Nephrotic syndrome with unspecified morphologic changes |
| N050 | Unspecified nephritic syndrome with minor glomerular abnormality |
| N051 | Unspecified nephritic syndrome with focal and segmental glomerular lesions |
| N052 | Unspecified nephritic syndrome with diffuse membranous glomerulonephritis |
| N053 | Unspecified nephritic syndrome with diffuse mesangial proliferative glomerulonephritis |
| N054 | Unspecified nephritic syndrome with diffuse endocapillary proliferative glomerulonephritis |
| N055 | Unspecified nephritic syndrome with diffuse mesangiocapillary glomerulonephritis |
| N056 | Unspecified nephritic syndrome with dense deposit disease |
| N057 | Unspecified nephritic syndrome with diffuse crescentic glomerulonephritis |
| N058 | Unspecified nephritic syndrome with other morphologic changes |
| N059 | Unspecified nephritic syndrome with unspecified morphologic changes |
| N060 | Isolated proteinuria with minor glomerular abnormality |
| N061 | Isolated proteinuria with focal and segmental glomerular lesions |
| N062 | Isolated proteinuria with diffuse membranous glomerulonephritis |
| N063 | Isolated proteinuria with diffuse mesangial proliferative glomerulonephritis |
| N064 | Isolated proteinuria with diffuse endocapillary proliferative glomerulonephritis |

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| N065 | Isolated proteinuria with diffuse mesangiocapillary glomerulonephritis |
| N066 | Isolated proteinuria with dense deposit disease |
| N067 | Isolated proteinuria with diffuse crescentic glomerulonephritis |
| N068 | Isolated proteinuria with other morphologic lesion |
| N069 | Isolated proteinuria with unspecified morphologic lesion |
| N070 | Hereditary nephropathy, not elsewhere classified with minor glomerular abnormality |
| N071 | Hereditary nephropathy, not elsewhere classified with focal and segmental glomerular lesions |
| N072 | Hereditary nephropathy, not elsewhere classified with diffuse membranous glomerulonephritis |
| N073 | Hereditary nephropathy, not elsewhere classified with diffuse mesangial proliferative glomerulonephritis |
| N074 | Hereditary nephropathy, not elsewhere classified with diffuse endocapillary proliferative glomerulonephritis |
| N075 | Hereditary nephropathy, not elsewhere classified with diffuse mesangiocapillary glomerulonephritis |
| N076 | Hereditary nephropathy, not elsewhere classified with dense deposit disease |
| N077 | Hereditary nephropathy, not elsewhere classified with diffuse crescentic glomerulonephritis |
| N078 | Hereditary nephropathy, not elsewhere classified with other morphologic lesions |
| N079 | Hereditary nephropathy, not elsewhere classified with unspecified morphologic lesions |
| N08 | Glomerular disorders in diseases classified elsewhere |
| N130 | Hydronephrosis with ureteropelvic junction obstruction |
| N131 | Hydronephrosis with ureteral stricture, not elsewhere classified |
| N132 | Hydronephrosis with renal and ureteral calculous obstruction |
| N1330 | Unspecified hydronephrosis |
| N1339 | Other hydronephrosis |
| N140 | Analgesic nephropathy |
| N141 | Nephropathy induced by other drugs, medicaments and biological substances |
| N142 | Nephropathy induced by unspecified drug, medicament or biological substance |
| N143 | Nephropathy induced by heavy metals |
| N144 | Toxic nephropathy, not elsewhere classified |
| N150 | Balkan nephropathy |
| N158 | Other specified renal tubulo-interstitial diseases |
| N159 | Renal tubulo-interstitial disease, unspecified |
| N16 | Renal tubulo-interstitial disorders in diseases classified elsewhere |
| N170 | Acute kidney failure with tubular necrosis |
| N171 | Acute kidney failure with acute cortical necrosis |
| N172 | Acute kidney failure with medullary necrosis |
| N178 | Other acute kidney failure |
| N179 | Acute kidney failure, unspecified |
| N181 | Chronic kidney disease, stage 1 |
| N182 | Chronic kidney disease, stage 2 (mild) |
| N183 | Chronic kidney disease, stage 3 (moderate) |
| N184 | Chronic kidney disease, stage 4 (severe) |

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| N185 | Chronic kidney disease, stage 5 |
| N186 | End stage renal disease |
| N189 | Chronic kidney disease, unspecified |
| N19 | Unspecified kidney failure |
| N250 | Renal osteodystrophy |
| N251 | Nephrogenic diabetes insipidus |
| N2581 | Secondary hyperparathyroidism of renal origin |
| N2589 | Other disorders resulting from impaired renal tubular function |
| N259 | Disorder resulting from impaired renal tubular function, unspecified |
| N261 | Atrophy of kidney (terminal) |
| N269 | Renal sclerosis, unspecified |
| Q6102 | Congenital multiple renal cysts |
| Q6111 | Cystic dilatation of collecting ducts |
| Q6119 | Other polycystic kidney, infantile type |
| Q612 | Polycystic kidney, adult type |
| Q613 | Polycystic kidney, unspecified |
| Q614 | Renal dysplasia |
| Q615 | Medullary cystic kidney |
| Q618 | Other cystic kidney diseases |
| Q620 | Congenital hydronephrosis |
| Q6210 | Congenital occlusion of ureter, unspecified |
| Q6211 | Congenital occlusion of ureteropelvic junction |
| Q6212 | Congenital occlusion of ureterovesical orifice |
| Q6231 | Congenital ureterocele, orthotopic |
| Q6232 | Cecoureterocele |
| Q6239 | Other obstructive defects of renal pelvis and ureter |
| R944 | Abnormal results of kidney function studies |

A14: COGNITIVE IMPAIRMENT

| ICD-10-CM | |
|-----------|--|
| Code | Descriptor |
| I6930 | Unspecified sequelae of cerebral infarction |
| I6931 | Cognitive deficits following cerebral infarction |
| I69310 | Attention and concentration deficit following cerebral infarction |
| I69311 | Memory deficit following cerebral infarction |
| I69312 | Visuospatial deficit and spatial neglect following cerebral infarction |
| I69313 | Psychomotor deficit following cerebral infarction |
| I69314 | Frontal lobe and executive function deficit following cerebral infarction |
| I69315 | Cognitive social or emotional deficit following cerebral infarction |
| I69318 | Other symptoms and signs involving cognitive functions following cerebral infarction |

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| I69319 | Unspecified symptoms and signs involving cognitive functions following cerebral infarction |
| I69320 | Aphasia following cerebral infarction |
| I69321 | Dysphasia following cerebral infarction |
| I69322 | Dysarthria following cerebral infarction |
| I69323 | Fluency disorder following cerebral infarction |
| I69328 | Other speech and language deficits following cerebral infarction |
| I69390 | Apraxia following cerebral infarction |
| I69398 | Other sequelae of cerebral infarction |
| I6910 | Unspecified sequelae of nontraumatic intracerebral hemorrhage |
| I6911 | Cognitive deficits following nontraumatic intracerebral hemorrhage |
| I69110 | Attention and concentration deficit following nontraumatic intracerebral hemorrhage |
| I69111 | Memory deficit following nontraumatic intracerebral hemorrhage |
| I69112 | Visuospatial deficit and spatial neglect following nontraumatic intracerebral hemorrhage |
| I69113 | Psychomotor deficit following nontraumatic intracerebral hemorrhage |
| I69114 | Frontal lobe and executive function deficit following nontraumatic intracerebral hemorrhage |
| I69115 | Cognitive social or emotional deficit following nontraumatic intracerebral hemorrhage |
| I69118 | Other symptoms and signs involving cognitive functions following nontraumatic intracerebral hemorrhage |
| I69119 | Unspecified symptoms and signs involving cognitive functions following nontraumatic intracerebral hemorrhage |
| I69120 | Aphasia following nontraumatic intracerebral hemorrhage |
| I69121 | Dysphasia following nontraumatic intracerebral hemorrhage |
| I69122 | Dysarthria following nontraumatic intracerebral hemorrhage |
| I69123 | Fluency disorder following nontraumatic intracerebral hemorrhage |
| I69128 | Other speech and language deficits following nontraumatic intracerebral hemorrhage |
| I69190 | Apraxia following nontraumatic intracerebral hemorrhage |
| I69198 | Other sequelae of nontraumatic intracerebral hemorrhage |
| G3184 | Mild cognitive impairment, so stated |
| I6901 | Cognitive deficits following nontraumatic subarachnoid hemorrhage |
| I69015 | Cognitive social or emotional deficit following nontraumatic subarachnoid hemorrhage |
| I69018 | Other symptoms and signs involving cognitive functions following nontraumatic subarachnoid hemorrhage |
| I69019 | Unspecified symptoms and signs involving cognitive functions following nontraumatic subarachnoid hemorrhage |
| I6921 | Cognitive deficits following other nontraumatic intracranial hemorrhage |
| I69215 | Cognitive social or emotional deficit following other nontraumatic intracranial hemorrhage |
| I69218 | Other symptoms and signs involving cognitive functions following other nontraumatic intracranial hemorrhage |
| I69219 | Unspecified symptoms and signs involving cognitive functions following other nontraumatic intracranial hemorrhage |
| I6981 | Cognitive deficits following other cerebrovascular disease |
| I69815 | Cognitive social or emotional deficit following other cerebrovascular disease |
| I69818 | Other symptoms and signs involving cognitive functions following other cerebrovascular disease |

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| I69819 | Unspecified symptoms and signs involving cognitive functions following other cerebrovascular disease |
| I6991 | Cognitive deficits following unspecified cerebrovascular disease |
| I69915 | Cognitive social or emotional deficit following unspecified cerebrovascular disease |
| I69918 | Other symptoms and signs involving cognitive functions following unspecified cerebrovascular disease |
| I69919 | Unspecified symptoms and signs involving cognitive functions following unspecified cerebrovascular disease |
| R4181 | Age-related cognitive decline |
| R41841 | Cognitive communication deficit |
| R4189 | Other symptoms and signs involving cognitive functions and awareness |
| R419 | Unspecified symptoms and signs involving cognitive functions and awareness |
| F0150 | Vascular dementia without behavioral disturbance |
| F0151 | Vascular dementia with behavioral disturbance |
| F0280 | Dementia in other diseases classified elsewhere without behavioral disturbance |
| F0281 | Dementia in other diseases classified elsewhere with behavioral disturbance |
| F0390 | Unspecified dementia without behavioral disturbance |
| F0391 | Unspecified dementia with behavioral disturbance |
| G3109 | Other frontotemporal dementia |

A15: CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

| ICD-10-CM Code | Descriptor |
|----------------|--|
| J40 | Bronchitis, not specified as acute or chronic |
| J411 | Mucopurulent chronic bronchitis |
| J418 | Mixed simple and mucopurulent chronic bronchitis |
| J42 | Unspecified chronic bronchitis |
| J430 | Unilateral pulmonary emphysema [MacLeod's syndrome] |
| J431 | Panlobular emphysema |
| J432 | Centrilobular emphysema |
| J438 | Other emphysema |
| J439 | Emphysema, unspecified |
| J440 | Chronic obstructive pulmon disease w acute lower resp infct |
| J441 | Chronic obstructive pulmonary disease w (acute) exacerbation |
| J449 | Chronic obstructive pulmonary disease, unspecified |
| J470 | Bronchiectasis with acute lower respiratory infection |
| J471 | Bronchiectasis with (acute) exacerbation |
| J479 | Bronchiectasis, uncomplicated |

A16: GALLSTONES

| ICD-10-CM Code | Descriptor |
|----------------|--|
| K8000 | Calculus of gallbladder with acute cholecystitis without obstruction |
| K8001 | Calculus of gallbladder with acute cholecystitis with obstruction |
| K8010 | Calculus of gallbladder with chronic cholecystitis without obstruction |
| K8011 | Calculus of gallbladder with chronic cholecystitis with obstruction |
| K8012 | Calculus of gallbladder with acute and chronic cholecystitis without obstruction |
| K8013 | Calculus of gallbladder with acute and chronic cholecystitis with obstruction |
| K8018 | Calculus of gallbladder with other cholecystitis without obstruction |
| K8019 | Calculus of gallbladder with other cholecystitis with obstruction |
| K8020 | Calculus of gallbladder without cholecystitis without obstruction |
| K8021 | Calculus of gallbladder without cholecystitis with obstruction |
| K8030 | Calculus of bile duct with cholangitis, unspecified, without obstruction |
| K8031 | Calculus of bile duct with cholangitis, unspecified, with obstruction |
| K8032 | Calculus of bile duct with acute cholangitis without obstruction |
| K8033 | Calculus of bile duct with acute cholangitis with obstruction |
| K8034 | Calculus of bile duct with chronic cholangitis without obstruction |
| K8035 | Calculus of bile duct with chronic cholangitis with obstruction |
| K8036 | Calculus of bile duct with acute and chronic cholangitis without obstruction |
| K8037 | Calculus of bile duct with acute and chronic cholangitis with obstruction |
| K8040 | Calculus of bile duct with cholecystitis, unspecified, without obstruction |
| K8041 | Calculus of bile duct with cholecystitis, unspecified, with obstruction |
| K8042 | Calculus of bile duct with acute cholecystitis without obstruction |
| K8043 | Calculus of bile duct with acute cholecystitis with obstruction |
| K8044 | Calculus of bile duct with chronic cholecystitis without obstruction |
| K8045 | Calculus of bile duct with chronic cholecystitis with obstruction |
| K8046 | Calculus of bile duct with acute and chronic cholecystitis without obstruction |
| K8047 | Calculus of bile duct with acute and chronic cholecystitis with obstruction |
| K8050 | Calculus of bile duct without cholangitis or cholecystitis without obstruction |
| K8051 | Calculus of bile duct without cholangitis or cholecystitis with obstruction |
| K8060 | Calculus of gallbladder and bile duct with cholecystitis, unspecified, without obstruction |
| K8061 | Calculus of gallbladder and bile duct with cholecystitis, unspecified, with obstruction |
| K8062 | Calculus of gallbladder and bile duct with acute cholecystitis without obstruction |
| K8063 | Calculus of gallbladder and bile duct with acute cholecystitis with obstruction |
| K8064 | Calculus of gallbladder and bile duct with chronic cholecystitis without obstruction |
| K8065 | Calculus of gallbladder and bile duct with chronic cholecystitis with obstruction |
| K8066 | Calculus of gallbladder and bile duct with acute and chronic cholecystitis without obstruction |
| K8067 | Calculus of gallbladder and bile duct with acute and chronic cholecystitis with obstruction |

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| K8070 | Calculus of gallbladder and bile duct without cholecystitis without obstruction |
| K8071 | Calculus of gallbladder and bile duct without cholecystitis with obstruction |

A17: HEART FAILURE

| ICD-10-CM Code | Descriptor |
|-------------------|---|
| I0981 | Rheumatic heart failure |
| I110 | Hypertensive heart disease with heart failure |
| I130 | Hyp hrt & chr kdny dis w hrt fail and stg 1-4/unsp chr kdny |
| I132 | Hyp hrt & chr kdny dis w hrt fail and w stg 5 chr kdny/ESRD |
| I501 | Left ventricular failure, unspecified |
| I5020 | Unspecified systolic (congestive) heart failure |
| I5021 | Acute systolic (congestive) heart failure |
| I5022 | Chronic systolic (congestive) heart failure |
| I5023 | Acute on chronic systolic (congestive) heart failure |
| I5030 | Unspecified diastolic (congestive) heart failure |
| I5031 | Acute diastolic (congestive) heart failure |
| I5032 | Chronic diastolic (congestive) heart failure |
| I5033 | Acute on chronic diastolic (congestive) heart failure |
| I5040 | Unsp combined systolic and diastolic (congestive) hrt fail |
| I5041 | Acute combined systolic and diastolic (congestive) hrt fail |
| I5042 | Chronic combined systolic and diastolic hrt fail |
| I5043 | Acute on chronic combined systolic and diastolic hrt fail |
| I50810 | Right heart failure, unspecified |
| I50811 | Acute right heart failure |
| I50812 | Chronic right heart failure |
| I50813 | Acute on chronic right heart failure |
| I50814 | Right heart failure due to left heart failure |
| I5082 | Biventricular heart failure |
| I5083 | High output heart failure |
| I5084 | End stage heart failure |
| I5089 | Other heart failure |
| I509 | Heart failure, unspecified |

A18: NON-PRESSURE ULCER LOWER EXTREMITY

| ICD-10-CM Code | Descriptor |
|-------------------|--|
| L97101 | Non-pressure chronic ulcer of unspecified thigh limited to breakdown of skin |
| L97102 | Non-pressure chronic ulcer of unspecified thigh with fat layer exposed |
| L97103 | Non-pressure chronic ulcer of unspecified thigh with necrosis of muscle |
| L97104 | Non-pressure chronic ulcer of unspecified thigh with necrosis of bone |
| L97105 | Non-pressure chronic ulcer of unspecified thigh with muscle involvement without evidence of necrosis |
| L97106 | Non-pressure chronic ulcer of unspecified thigh with bone involvement without evidence of necrosis |
| L97108 | Non-pressure chronic ulcer of unspecified thigh with other specified severity |
| L97109 | Non-pressure chronic ulcer of unspecified thigh with unspecified severity |
| L97111 | Non-pressure chronic ulcer of right thigh limited to breakdown of skin |
| L97112 | Non-pressure chronic ulcer of right thigh with fat layer exposed |
| L97113 | Non-pressure chronic ulcer of right thigh with necrosis of muscle |
| L97114 | Non-pressure chronic ulcer of right thigh with necrosis of bone |
| L97115 | Non-pressure chronic ulcer of right thigh with muscle involvement without evidence of necrosis |
| L97116 | Non-pressure chronic ulcer of right thigh with bone involvement without evidence of necrosis |
| L97118 | Non-pressure chronic ulcer of right thigh with other specified severity |
| L97119 | Non-pressure chronic ulcer of right thigh with unspecified severity |
| L97121 | Non-pressure chronic ulcer of left thigh limited to breakdown of skin |
| L97122 | Non-pressure chronic ulcer of left thigh with fat layer exposed |
| L97123 | Non-pressure chronic ulcer of left thigh with necrosis of muscle |
| L97124 | Non-pressure chronic ulcer of left thigh with necrosis of bone |
| L97125 | Non-pressure chronic ulcer of left thigh with muscle involvement without evidence of necrosis |
| L97126 | Non-pressure chronic ulcer of left thigh with bone involvement without evidence of necrosis |
| L97128 | Non-pressure chronic ulcer of left thigh with other specified severity |
| L97129 | Non-pressure chronic ulcer of left thigh with unspecified severity |
| L97201 | Non-pressure chronic ulcer of unspecified calf limited to breakdown of skin |
| L97202 | Non-pressure chronic ulcer of unspecified calf with fat layer exposed |
| L97203 | Non-pressure chronic ulcer of unspecified calf with necrosis of muscle |
| L97204 | Non-pressure chronic ulcer of unspecified calf with necrosis of bone |
| L97205 | Non-pressure chronic ulcer of unspecified calf with muscle involvement without evidence of necrosis |
| L97206 | Non-pressure chronic ulcer of unspecified calf with bone involvement without evidence of necrosis |
| L97208 | Non-pressure chronic ulcer of unspecified calf with other specified severity |
| L97209 | Non-pressure chronic ulcer of unspecified calf with unspecified severity |
| L97211 | Non-pressure chronic ulcer of right calf limited to breakdown of skin |
| L97212 | Non-pressure chronic ulcer of right calf with fat layer exposed |
| L97213 | Non-pressure chronic ulcer of right calf with necrosis of muscle |
| L97214 | Non-pressure chronic ulcer of right calf with necrosis of bone |

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| L97215 | Non-pressure chronic ulcer of right calf with muscle involvement without evidence of necrosis |
| L97216 | Non-pressure chronic ulcer of right calf with bone involvement without evidence of necrosis |
| L97218 | Non-pressure chronic ulcer of right calf with other specified severity |
| L97219 | Non-pressure chronic ulcer of right calf with unspecified severity |
| L97221 | Non-pressure chronic ulcer of left calf limited to breakdown of skin |
| L97222 | Non-pressure chronic ulcer of left calf with fat layer exposed |
| L97223 | Non-pressure chronic ulcer of left calf with necrosis of muscle |
| L97224 | Non-pressure chronic ulcer of left calf with necrosis of bone |
| L97225 | Non-pressure chronic ulcer of left calf with muscle involvement without evidence of necrosis |
| L97226 | Non-pressure chronic ulcer of left calf with bone involvement without evidence of necrosis |
| L97228 | Non-pressure chronic ulcer of left calf with other specified severity |
| L97229 | Non-pressure chronic ulcer of left calf with unspecified severity |
| L97301 | Non-pressure chronic ulcer of unspecified ankle limited to breakdown of skin |
| L97302 | Non-pressure chronic ulcer of unspecified ankle with fat layer exposed |
| L97303 | Non-pressure chronic ulcer of unspecified ankle with necrosis of muscle |
| L97304 | Non-pressure chronic ulcer of unspecified ankle with necrosis of bone |
| L97305 | Non-pressure chronic ulcer of unspecified ankle with muscle involvement without evidence of necrosis |
| L97306 | Non-pressure chronic ulcer of unspecified ankle with bone involvement without evidence of necrosis |
| L97308 | Non-pressure chronic ulcer of unspecified ankle with other specified severity |
| L97309 | Non-pressure chronic ulcer of unspecified ankle with unspecified severity |
| L97311 | Non-pressure chronic ulcer of right ankle limited to breakdown of skin |
| L97312 | Non-pressure chronic ulcer of right ankle with fat layer exposed |
| L97313 | Non-pressure chronic ulcer of right ankle with necrosis of muscle |
| L97314 | Non-pressure chronic ulcer of right ankle with necrosis of bone |
| L97315 | Non-pressure chronic ulcer of right ankle with muscle involvement without evidence of necrosis |
| L97316 | Non-pressure chronic ulcer of right ankle with bone involvement without evidence of necrosis |
| L97318 | Non-pressure chronic ulcer of right ankle with other specified severity |
| L97319 | Non-pressure chronic ulcer of right ankle with unspecified severity |
| L97321 | Non-pressure chronic ulcer of left ankle limited to breakdown of skin |
| L97322 | Non-pressure chronic ulcer of left ankle with fat layer exposed |
| L97323 | Non-pressure chronic ulcer of left ankle with necrosis of muscle |
| L97324 | Non-pressure chronic ulcer of left ankle with necrosis of bone |
| L97325 | Non-pressure chronic ulcer of left ankle with muscle involvement without evidence of necrosis |
| L97326 | Non-pressure chronic ulcer of left ankle with bone involvement without evidence of necrosis |
| L97328 | Non-pressure chronic ulcer of left ankle with other specified severity |
| L97329 | Non-pressure chronic ulcer of left ankle with unspecified severity |
| L97401 | Non-pressure chronic ulcer of unspecified heel and midfoot limited to breakdown of skin |
| L97402 | Non-pressure chronic ulcer of unspecified heel and midfoot with fat layer exposed |
| L97403 | Non-pressure chronic ulcer of unspecified heel and midfoot with necrosis of muscle |
| L97404 | Non-pressure chronic ulcer of unspecified heel and midfoot with necrosis of bone |

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| L97405 | Non-pressure chronic ulcer of unspecified heel and midfoot with muscle involvement without evidence of necrosis |
| L97406 | Non-pressure chronic ulcer of unspecified heel and midfoot with bone involvement without evidence of necrosis |
| L97408 | Non-pressure chronic ulcer of unspecified heel and midfoot with other specified severity |
| L97409 | Non-pressure chronic ulcer of unspecified heel and midfoot with unspecified severity |
| L97411 | Non-pressure chronic ulcer of right heel and midfoot limited to breakdown of skin |
| L97412 | Non-pressure chronic ulcer of right heel and midfoot with fat layer exposed |
| L97413 | Non-pressure chronic ulcer of right heel and midfoot with necrosis of muscle |
| L97414 | Non-pressure chronic ulcer of right heel and midfoot with necrosis of bone |
| L97415 | Non-pressure chronic ulcer of right heel and midfoot with muscle involvement without evidence of necrosis |
| L97416 | Non-pressure chronic ulcer of right heel and midfoot with bone involvement without evidence of necrosis |
| L97418 | Non-pressure chronic ulcer of right heel and midfoot with other specified severity |
| L97419 | Non-pressure chronic ulcer of right heel and midfoot with unspecified severity |
| L97421 | Non-pressure chronic ulcer of left heel and midfoot limited to breakdown of skin |
| L97422 | Non-pressure chronic ulcer of left heel and midfoot with fat layer exposed |
| L97423 | Non-pressure chronic ulcer of left heel and midfoot with necrosis of muscle |
| L97424 | Non-pressure chronic ulcer of left heel and midfoot with necrosis of bone |
| L97425 | Non-pressure chronic ulcer of left heel and midfoot with muscle involvement without evidence of necrosis |
| L97426 | Non-pressure chronic ulcer of left heel and midfoot with bone involvement without evidence of necrosis |
| L97428 | Non-pressure chronic ulcer of left heel and midfoot with other specified severity |
| L97429 | Non-pressure chronic ulcer of left heel and midfoot with unspecified severity |
| L97501 | Non-pressure chronic ulcer of other part of unspecified foot limited to breakdown of skin |
| L97502 | Non-pressure chronic ulcer of other part of unspecified foot with fat layer exposed |
| L97503 | Non-pressure chronic ulcer of other part of unspecified foot with necrosis of muscle |
| L97504 | Non-pressure chronic ulcer of other part of unspecified foot with necrosis of bone |
| L97505 | Non-pressure chronic ulcer of other part of unspecified foot with muscle involvement without evidence of necrosis |
| L97506 | Non-pressure chronic ulcer of other part of unspecified foot with bone involvement without evidence of necrosis |
| L97508 | Non-pressure chronic ulcer of other part of unspecified foot with other specified severity |
| L97509 | Non-pressure chronic ulcer of other part of unspecified foot with unspecified severity |
| L97511 | Non-pressure chronic ulcer of other part of right foot limited to breakdown of skin |
| L97512 | Non-pressure chronic ulcer of other part of right foot with fat layer exposed |
| L97513 | Non-pressure chronic ulcer of other part of right foot with necrosis of muscle |
| L97514 | Non-pressure chronic ulcer of other part of right foot with necrosis of bone |
| L97515 | Non-pressure chronic ulcer of other part of right foot with muscle involvement without evidence of necrosis |
| L97516 | Non-pressure chronic ulcer of other part of right foot with bone involvement without evidence of necrosis |
| L97518 | Non-pressure chronic ulcer of other part of right foot with other specified severity |

| | |
|--------|--|
| L97519 | Non-pressure chronic ulcer of other part of right foot with unspecified severity |
| L97521 | Non-pressure chronic ulcer of other part of left foot limited to breakdown of skin |
| L97522 | Non-pressure chronic ulcer of other part of left foot with fat layer exposed |
| L97523 | Non-pressure chronic ulcer of other part of left foot with necrosis of muscle |
| L97524 | Non-pressure chronic ulcer of other part of left foot with necrosis of bone |
| L97525 | Non-pressure chronic ulcer of other part of left foot with muscle involvement without evidence of necrosis |
| L97526 | Non-pressure chronic ulcer of other part of left foot with bone involvement without evidence of necrosis |
| L97528 | Non-pressure chronic ulcer of other part of left foot with other specified severity |
| L97529 | Non-pressure chronic ulcer of other part of left foot with unspecified severity |
| L97801 | Non-pressure chronic ulcer of other part of unspecified lower leg limited to breakdown of skin |
| L97802 | Non-pressure chronic ulcer of other part of unspecified lower leg with fat layer exposed |
| L97803 | Non-pressure chronic ulcer of other part of unspecified lower leg with necrosis of muscle |
| L97804 | Non-pressure chronic ulcer of other part of unspecified lower leg with necrosis of bone |
| L97805 | Non-pressure chronic ulcer of other part of unspecified lower leg with muscle involvement without evidence of necrosis |
| L97806 | Non-pressure chronic ulcer of other part of unspecified lower leg with bone involvement without evidence of necrosis |
| L97808 | Non-pressure chronic ulcer of other part of unspecified lower leg with other specified severity |
| L97809 | Non-pressure chronic ulcer of other part of unspecified lower leg with unspecified severity |
| L97811 | Non-pressure chronic ulcer of other part of right lower leg limited to breakdown of skin |
| L97812 | Non-pressure chronic ulcer of other part of right lower leg with fat layer exposed |
| L97813 | Non-pressure chronic ulcer of other part of right lower leg with necrosis of muscle |
| L97814 | Non-pressure chronic ulcer of other part of right lower leg with necrosis of bone |
| L97815 | Non-pressure chronic ulcer of other part of right lower leg with muscle involvement without evidence of necrosis |
| L97816 | Non-pressure chronic ulcer of other part of right lower leg with bone involvement without evidence of necrosis |
| L97818 | Non-pressure chronic ulcer of other part of right lower leg with other specified severity |
| L97819 | Non-pressure chronic ulcer of other part of right lower leg with unspecified severity |
| L97821 | Non-pressure chronic ulcer of other part of left lower leg limited to breakdown of skin |
| L97822 | Non-pressure chronic ulcer of other part of left lower leg with fat layer exposed |
| L97823 | Non-pressure chronic ulcer of other part of left lower leg with necrosis of muscle |
| L97824 | Non-pressure chronic ulcer of other part of left lower leg with necrosis of bone |
| L97825 | Non-pressure chronic ulcer of other part of left lower leg with muscle involvement without evidence of necrosis |
| L97826 | Non-pressure chronic ulcer of other part of left lower leg with bone involvement without evidence of necrosis |
| L97828 | Non-pressure chronic ulcer of other part of left lower leg with other specified severity |
| L97829 | Non-pressure chronic ulcer of other part of left lower leg with unspecified severity |
| L97901 | Non-pressure chronic ulcer of unspecified part of unspecified lower leg limited to breakdown of skin |
| L97902 | Non-pressure chronic ulcer of unspecified part of unspecified lower leg with fat layer exposed |
| L97903 | Non-pressure chronic ulcer of unspecified part of unspecified lower leg with necrosis of muscle |

| | |
|--------|--|
| L97904 | Non-pressure chronic ulcer of unspecified part of unspecified lower leg with necrosis of bone |
| L97905 | Non-pressure chronic ulcer of unspecified part of unspecified lower leg with muscle involvement without evidence of necrosis |
| L97906 | Non-pressure chronic ulcer of unspecified part of unspecified lower leg with bone involvement without evidence of necrosis |
| L97908 | Non-pressure chronic ulcer of unspecified part of unspecified lower leg with other specified severity |
| L97909 | Non-pressure chronic ulcer of unspecified part of unspecified lower leg with unspecified severity |
| L97911 | Non-pressure chronic ulcer of unspecified part of right lower leg limited to breakdown of skin |
| L97912 | Non-pressure chronic ulcer of unspecified part of right lower leg with fat layer exposed |
| L97913 | Non-pressure chronic ulcer of unspecified part of right lower leg with necrosis of muscle |
| L97914 | Non-pressure chronic ulcer of unspecified part of right lower leg with necrosis of bone |
| L97915 | Non-pressure chronic ulcer of unspecified part of right lower leg with muscle involvement without evidence of necrosis |
| L97916 | Non-pressure chronic ulcer of unspecified part of right lower leg with bone involvement without evidence of necrosis |
| L97918 | Non-pressure chronic ulcer of unspecified part of right lower leg with other specified severity |
| L97919 | Non-pressure chronic ulcer of unspecified part of right lower leg with unspecified severity |
| L97921 | Non-pressure chronic ulcer of unspecified part of left lower leg limited to breakdown of skin |
| L97922 | Non-pressure chronic ulcer of unspecified part of left lower leg with fat layer exposed |
| L97923 | Non-pressure chronic ulcer of unspecified part of left lower leg with necrosis of muscle |
| L97924 | Non-pressure chronic ulcer of unspecified part of left lower leg with necrosis of bone |
| L97925 | Non-pressure chronic ulcer of unspecified part of left lower leg with muscle involvement without evidence of necrosis |
| L97926 | Non-pressure chronic ulcer of unspecified part of left lower leg with bone involvement without evidence of necrosis |
| L97928 | Non-pressure chronic ulcer of unspecified part of left lower leg with other specified severity |
| L97929 | Non-pressure chronic ulcer of unspecified part of left lower leg with unspecified severity |

A19: OSTEONECROSIS

| ICD-10-CM Code | Descriptor |
|----------------|---|
| M8700 | Idiopathic aseptic necrosis of unspecified bone |
| M87011 | Idiopathic aseptic necrosis of right shoulder |
| M87012 | Idiopathic aseptic necrosis of left shoulder |
| M87019 | Idiopathic aseptic necrosis of unspecified shoulder |
| M87021 | Idiopathic aseptic necrosis of right humerus |
| M87022 | Idiopathic aseptic necrosis of left humerus |
| M87029 | Idiopathic aseptic necrosis of unspecified humerus |
| M87031 | Idiopathic aseptic necrosis of right radius |
| M87032 | Idiopathic aseptic necrosis of left radius |
| M87033 | Idiopathic aseptic necrosis of unspecified radius |
| M87034 | Idiopathic aseptic necrosis of right ulna |

| | |
|--------|--|
| M87035 | Idiopathic aseptic necrosis of left ulna |
| M87036 | Idiopathic aseptic necrosis of unspecified ulna |
| M87037 | Idiopathic aseptic necrosis of right carpus |
| M87038 | Idiopathic aseptic necrosis of left carpus |
| M87039 | Idiopathic aseptic necrosis of unspecified carpus |
| M87041 | Idiopathic aseptic necrosis of right hand |
| M87042 | Idiopathic aseptic necrosis of left hand |
| M87043 | Idiopathic aseptic necrosis of unspecified hand |
| M87044 | Idiopathic aseptic necrosis of right finger(s) |
| M87045 | Idiopathic aseptic necrosis of left finger(s) |
| M87046 | Idiopathic aseptic necrosis of unspecified finger(s) |
| M87050 | Idiopathic aseptic necrosis of pelvis |
| M87051 | Idiopathic aseptic necrosis of right femur |
| M87052 | Idiopathic aseptic necrosis of left femur |
| M87059 | Idiopathic aseptic necrosis of unspecified femur |
| M87061 | Idiopathic aseptic necrosis of right tibia |
| M87062 | Idiopathic aseptic necrosis of left tibia |
| M87063 | Idiopathic aseptic necrosis of unspecified tibia |
| M87064 | Idiopathic aseptic necrosis of right fibula |
| M87065 | Idiopathic aseptic necrosis of left fibula |
| M87066 | Idiopathic aseptic necrosis of unspecified fibula |
| M87071 | Idiopathic aseptic necrosis of right ankle |
| M87072 | Idiopathic aseptic necrosis of left ankle |
| M87073 | Idiopathic aseptic necrosis of unspecified ankle |
| M87074 | Idiopathic aseptic necrosis of right foot |
| M87075 | Idiopathic aseptic necrosis of left foot |
| M87076 | Idiopathic aseptic necrosis of unspecified foot |
| M87077 | Idiopathic aseptic necrosis of right toe(s) |
| M87078 | Idiopathic aseptic necrosis of left toe(s) |
| M87079 | Idiopathic aseptic necrosis of unspecified toe(s) |
| M8708 | Idiopathic aseptic necrosis of bone, other site |
| M8709 | Idiopathic aseptic necrosis of bone, multiple sites |
| M8730 | Other secondary osteonecrosis, unspecified bone |
| M87311 | Other secondary osteonecrosis, right shoulder |
| M87312 | Other secondary osteonecrosis, left shoulder |
| M87319 | Other secondary osteonecrosis, unspecified shoulder |
| M87321 | Other secondary osteonecrosis, right humerus |
| M87322 | Other secondary osteonecrosis, left humerus |
| M87329 | Other secondary osteonecrosis, unspecified humerus |
| M87331 | Other secondary osteonecrosis of right radius |
| M87332 | Other secondary osteonecrosis of left radius |

| | |
|--------|--|
| M87333 | Other secondary osteonecrosis of unspecified radius |
| M87334 | Other secondary osteonecrosis of right ulna |
| M87335 | Other secondary osteonecrosis of left ulna |
| M87336 | Other secondary osteonecrosis of unspecified ulna |
| M87337 | Other secondary osteonecrosis of right carpus |
| M87338 | Other secondary osteonecrosis of left carpus |
| M87339 | Other secondary osteonecrosis of unspecified carpus |
| M87341 | Other secondary osteonecrosis, right hand |
| M87342 | Other secondary osteonecrosis, left hand |
| M87343 | Other secondary osteonecrosis, unspecified hand |
| M87344 | Other secondary osteonecrosis, right finger(s) |
| M87345 | Other secondary osteonecrosis, left finger(s) |
| M87346 | Other secondary osteonecrosis, unspecified finger(s) |
| M87350 | Other secondary osteonecrosis, pelvis |
| M87351 | Other secondary osteonecrosis, right femur |
| M87352 | Other secondary osteonecrosis, left femur |
| M87353 | Other secondary osteonecrosis, unspecified femur |
| M87361 | Other secondary osteonecrosis, right tibia |
| M87362 | Other secondary osteonecrosis, left tibia |
| M87363 | Other secondary osteonecrosis, unspecified tibia |
| M87364 | Other secondary osteonecrosis, right fibula |
| M87365 | Other secondary osteonecrosis, left fibula |
| M87366 | Other secondary osteonecrosis, unspecified fibula |
| M87371 | Other secondary osteonecrosis, right ankle |
| M87372 | Other secondary osteonecrosis, left ankle |
| M87373 | Other secondary osteonecrosis, unspecified ankle |
| M87374 | Other secondary osteonecrosis, right foot |
| M87375 | Other secondary osteonecrosis, left foot |
| M87376 | Other secondary osteonecrosis, unspecified foot |
| M87377 | Other secondary osteonecrosis, right toe(s) |
| M87378 | Other secondary osteonecrosis, left toe(s) |
| M87379 | Other secondary osteonecrosis, unspecified toe(s) |
| M8738 | Other secondary osteonecrosis, other site |
| M8739 | Other secondary osteonecrosis, multiple sites |
| M8780 | Other osteonecrosis, unspecified bone |
| M87811 | Other osteonecrosis, right shoulder |
| M87812 | Other osteonecrosis, left shoulder |
| M87819 | Other osteonecrosis, unspecified shoulder |
| M87821 | Other osteonecrosis, right humerus |
| M87822 | Other osteonecrosis, left humerus |
| M87829 | Other osteonecrosis, unspecified humerus |

| | |
|--------|---|
| M87831 | Other osteonecrosis of right radius |
| M87832 | Other osteonecrosis of left radius |
| M87833 | Other osteonecrosis of unspecified radius |
| M87834 | Other osteonecrosis of right ulna |
| M87835 | Other osteonecrosis of left ulna |
| M87836 | Other osteonecrosis of unspecified ulna |
| M87837 | Other osteonecrosis of right carpus |
| M87838 | Other osteonecrosis of left carpus |
| M87839 | Other osteonecrosis of unspecified carpus |
| M87841 | Other osteonecrosis, right hand |
| M87842 | Other osteonecrosis, left hand |
| M87843 | Other osteonecrosis, unspecified hand |
| M87844 | Other osteonecrosis, right finger(s) |
| M87845 | Other osteonecrosis, left finger(s) |
| M87849 | Other osteonecrosis, unspecified finger(s) |
| M87850 | Other osteonecrosis, pelvis |
| M87851 | Other osteonecrosis, right femur |
| M87852 | Other osteonecrosis, left femur |
| M87859 | Other osteonecrosis, unspecified femur |
| M87861 | Other osteonecrosis, right tibia |
| M87862 | Other osteonecrosis, left tibia |
| M87863 | Other osteonecrosis, unspecified tibia |
| M87864 | Other osteonecrosis, right fibula |
| M87865 | Other osteonecrosis, left fibula |
| M87869 | Other osteonecrosis, unspecified fibula |
| M87871 | Other osteonecrosis, right ankle |
| M87872 | Other osteonecrosis, left ankle |
| M87873 | Other osteonecrosis, unspecified ankle |
| M87874 | Other osteonecrosis, right foot |
| M87875 | Other osteonecrosis, left foot |
| M87876 | Other osteonecrosis, unspecified foot |
| M87877 | Other osteonecrosis, right toe(s) |
| M87878 | Other osteonecrosis, left toe(s) |
| M87879 | Other osteonecrosis, unspecified toe(s) |
| M8788 | Other osteonecrosis, other site |
| M8789 | Other osteonecrosis, multiple sites |
| M879 | Osteonecrosis, unspecified |
| I87011 | Postthrombotic syndrome with ulcer of right lower extremity |
| I87012 | Postthrombotic syndrome with ulcer of left lower extremity |
| I87013 | Postthrombotic syndrome with ulcer of bilateral lower extremity |
| I87019 | Postthrombotic syndrome with ulcer of unspecified lower extremity |

| | |
|--------|---|
| 187031 | Postthrombotic syndrome with ulcer and inflammation of right lower extremity |
| 187032 | Postthrombotic syndrome with ulcer and inflammation of left lower extremity |
| 187033 | Postthrombotic syndrome with ulcer and inflammation of bilateral lower extremity |
| 187039 | Postthrombotic syndrome with ulcer and inflammation of unspecified lower extremity |
| 187311 | Chronic venous hypertension (idiopathic) with ulcer of right lower extremity |
| 187312 | Chronic venous hypertension (idiopathic) with ulcer of left lower extremity |
| 187313 | Chronic venous hypertension (idiopathic) with ulcer of bilateral lower extremity |
| 187319 | Chronic venous hypertension (idiopathic) with ulcer of unspecified lower extremity |
| 187331 | Chronic venous hypertension (idiopathic) with ulcer and inflammation of right lower extremity |
| 187332 | Chronic venous hypertension (idiopathic) with ulcer and inflammation of left lower extremity |
| 187333 | Chronic venous hypertension (idiopathic) with ulcer and inflammation of bilateral lower extremity |
| 187339 | Chronic venous hypertension (idiopathic) with ulcer and inflammation of unspecified lower extremity |

A20: PULMONARY HYPERTENSION

| ICD-10-CM Code | Descriptor |
|----------------|---|
| I270 | Primary pulmonary hypertension |
| I272 | Other secondary pulmonary hypertension |
| I2720 | Pulmonary hypertension, unspecified |
| I2721 | Secondary pulmonary arterial hypertension |
| I2722 | Pulmonary hypertension due to left heart disease |
| I2723 | Pulmonary hypertension due to lung diseases and hypoxia |
| I2724 | Chronic thromboembolic pulmonary hypertension |
| I2729 | Other secondary pulmonary hypertension |

A21: RETINOPATHY/RETINAL DETACHMENT/VITREOUS HEMORRHAGE

| ICD-10-CM Code | Descriptor |
|----------------|---|
| H3520 | Other non-diabetic proliferative retinopathy, unspecified eye |
| H3521 | Other non-diabetic proliferative retinopathy, right eye |
| H3522 | Other non-diabetic proliferative retinopathy, left eye |
| H3523 | Other non-diabetic proliferative retinopathy, bilateral |
| H3560 | Retinal hemorrhage, unspecified eye |
| H3561 | Retinal hemorrhage, right eye |
| H3562 | Retinal hemorrhage, left eye |
| H3563 | Retinal hemorrhage, bilateral |
| H3570 | Unspecified separation of retinal layers |
| H35711 | Central serous chorioretinopathy, right eye |
| H35712 | Central serous chorioretinopathy, left eye |

| | |
|--------|---|
| H35713 | Central serous chorioretinopathy, bilateral |
| H35719 | Central serous chorioretinopathy, unspecified eye |
| H35721 | Serous detachment of retinal pigment epithelium, right eye |
| H35722 | Serous detachment of retinal pigment epithelium, left eye |
| H35723 | Serous detachment of retinal pigment epithelium, bilateral |
| H35729 | Serous detachment of retinal pigment epithelium, unspecified eye |
| H35731 | Hemorrhagic detachment of retinal pigment epithelium, right eye |
| H35732 | Hemorrhagic detachment of retinal pigment epithelium, left eye |
| H35733 | Hemorrhagic detachment of retinal pigment epithelium, bilateral |
| H35739 | Hemorrhagic detachment of retinal pigment epithelium, unspecified eye |
| H3581 | Retinal edema |
| H3582 | Retinal ischemia |
| H3589 | Other specified retinal disorders |
| H359 | Unspecified retinal disorder |
| H36 | Retinal disorders in diseases classified elsewhere |
| H33001 | Unspecified retinal detachment with retinal break, right eye |
| H33002 | Unspecified retinal detachment with retinal break, left eye |
| H33003 | Unspecified retinal detachment with retinal break, bilateral |
| H33009 | Unspecified retinal detachment with retinal break, unspecified eye |
| H33011 | Retinal detachment with single break, right eye |
| H33012 | Retinal detachment with single break, left eye |
| H33013 | Retinal detachment with single break, bilateral |
| H33019 | Retinal detachment with single break, unspecified eye |
| H33021 | Retinal detachment with multiple breaks, right eye |
| H33022 | Retinal detachment with multiple breaks, left eye |
| H33023 | Retinal detachment with multiple breaks, bilateral |
| H33029 | Retinal detachment with multiple breaks, unspecified eye |
| H33031 | Retinal detachment with giant retinal tear, right eye |
| H33032 | Retinal detachment with giant retinal tear, left eye |
| H33033 | Retinal detachment with giant retinal tear, bilateral |
| H33039 | Retinal detachment with giant retinal tear, unspecified eye |
| H33041 | Retinal detachment with retinal dialysis, right eye |
| H33042 | Retinal detachment with retinal dialysis, left eye |
| H33043 | Retinal detachment with retinal dialysis, bilateral |
| H33049 | Retinal detachment with retinal dialysis, unspecified eye |
| H33051 | Total retinal detachment, right eye |
| H33052 | Total retinal detachment, left eye |
| H33053 | Total retinal detachment, bilateral |
| H33059 | Total retinal detachment, unspecified eye |
| H4310 | Vitreous hemorrhage, unspecified eye |
| H4311 | Vitreous hemorrhage, right eye |

| | |
|-------|--------------------------------|
| H4312 | Vitreous hemorrhage, left eye |
| H4313 | Vitreous hemorrhage, bilateral |

A22: SILENT CEREBRAL INFARCTION – RISK FACTOR

| ICD-10-CM Code | Descriptor |
|----------------|---|
| G40301 | Generalized idiopathic epilepsy and epileptic syndromes, not intractable, with status epilepticus |
| G40309 | Generalized idiopathic epilepsy and epileptic syndromes, not intractable, without status epilepticus |
| G40311 | Generalized idiopathic epilepsy and epileptic syndromes, intractable, with status epilepticus |
| G40319 | Generalized idiopathic epilepsy and epileptic syndromes, intractable, without status epilepticus |
| G40401 | Other generalized epilepsy and epileptic syndromes, not intractable, with status epilepticus |
| G40409 | Other generalized epilepsy and epileptic syndromes, not intractable, without status epilepticus |
| G40411 | Other generalized epilepsy and epileptic syndromes, intractable, with status epilepticus |
| G40419 | Other generalized epilepsy and epileptic syndromes, intractable, without status epilepticus |
| G40501 | Epileptic seizures related to external causes, not intractable, with status epilepticus |
| G40509 | Epileptic seizures related to external causes, not intractable, without status epilepticus |
| G40801 | Other epilepsy, not intractable, with status epilepticus |
| G40802 | Other epilepsy, not intractable, without status epilepticus |
| G40803 | Other epilepsy, intractable, with status epilepticus |
| G40804 | Other epilepsy, intractable, without status epilepticus |
| G40813 | Lennox-Gastaut syndrome, intractable, with status epilepticus |
| G40814 | Lennox-Gastaut syndrome, intractable, without status epilepticus |
| G40821 | Epileptic spasms, not intractable, with status epilepticus |
| G40822 | Epileptic spasms, not intractable, without status epilepticus |
| G40823 | Epileptic spasms, intractable, with status epilepticus |
| G40824 | Epileptic spasms, intractable, without status epilepticus |
| G40901 | Epilepsy, unspecified, not intractable, with status epilepticus |
| G40909 | Epilepsy, unspecified, not intractable, without status epilepticus |
| G40911 | Epilepsy, unspecified, intractable, with status epilepticus |
| G40919 | Epilepsy, unspecified, intractable, without status epilepticus |
| G40A01 | Absence epileptic syndrome, not intractable, with status epilepticus |
| G40A09 | Absence epileptic syndrome, not intractable, without status epilepticus |
| G40A11 | Absence epileptic syndrome, intractable, with status epilepticus |
| G40A19 | Absence epileptic syndrome, intractable, without status epilepticus |
| G40B01 | Juvenile myoclonic epilepsy, not intractable, with status epilepticus |
| G40B09 | Juvenile myoclonic epilepsy, not intractable, without status epilepticus |
| G40B11 | Juvenile myoclonic epilepsy, intractable, with status epilepticus |
| G40B19 | Juvenile myoclonic epilepsy, intractable, without status epilepticus |
| G40001 | Localization-related (focal) (partial) idiopathic epilepsy and epileptic syndromes with seizures of localized onset, not intractable, with status epilepticus |

| | |
|--------|--|
| G40009 | Localization-related (focal) (partial) idiopathic epilepsy and epileptic syndromes with seizures of localized onset, not intractable, without status epilepticus |
| G40011 | Localization-related (focal) (partial) idiopathic epilepsy and epileptic syndromes with seizures of localized onset, intractable, with status epilepticus |
| G40019 | Localization-related (focal) (partial) idiopathic epilepsy and epileptic syndromes with seizures of localized onset, intractable, without status epilepticus |
| G40101 | Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with simple partial seizures, not intractable, with status epilepticus |
| G40109 | Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with simple partial seizures, not intractable, without status epilepticus |
| G40111 | Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with simple partial seizures, intractable, with status epilepticus |
| G40119 | Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with simple partial seizures, intractable, without status epilepticus |
| G40201 | Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with complex partial seizures, not intractable, with status epilepticus |
| G40209 | Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with complex partial seizures, not intractable, without status epilepticus |
| G40211 | Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with complex partial seizures, intractable, with status epilepticus |
| G40219 | Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with complex partial seizures, intractable, without status epilepticus |
| G4089 | Other seizures |
| D72828 | Other elevated white blood cell count |
| D72829 | Elevated white blood cell count, unspecified |
| R030 | Elevated blood-pressure reading, without diagnosis of hypertension |
| I10 | Essential (primary) hypertension |
| I119 | Hypertensive heart disease without heart failure |
| I129 | Hypertensive chronic kidney disease w stg 1-4/unsp chr kidney |
| I150 | Renovascular hypertension |
| I151 | Hypertension secondary to other renal disorders |
| I152 | Hypertension secondary to endocrine disorders |
| I158 | Other secondary hypertension |
| I159 | Secondary hypertension, unspecified |
| I160 | Hypertensive urgency |
| I161 | Hypertensive emergency |
| I169 | Hypertensive crisis, unspecified |
| I673 | Progressive vascular leukoencephalopathy |

Appendix B: Blood Transfusion and Iron Chelation Code Lists

B1: BLOOD TRANSFUSION, HCPCS

| HCPCS | | |
|-------|-------|-------|
| 36430 | 36455 | 36512 |

B2: BLOOD TRANSFUSION, REVENUE CODES

| Revenue Code | Description |
|--------------|---|
| 0380 | Blood and Blood Products - General |
| 0381 | Blood and Blood Products - Packed red cells |
| 0382 | Blood and Blood Products - Whole blood and blood products |
| 0390 | Administration, Processing and Storage for Blood and Blood Components - General |
| 0391 | Administration, Processing and Storage for Blood and Blood Components - Administration (e.g., Transfusions) |
| 0392 | Administration, Processing and Storage for Blood and Blood Components - Processing and storage |
| 0399 | Administration, Processing and Storage for Blood and Blood Components - Other processing and storage |

B3: GENERIC DRUG NAMES USED TO IDENTIFY IRON CHELATION DRUGS

| Generic Drug Name | | |
|-------------------|-------------|-----------------------|
| Deferasirox | Deferiprone | Deferoxamine mesylate |

Appendix C: SCD Supportive Drugs and Opioid Code Lists

C1: GENERIC DRUG NAMES USED TO IDENTIFY OTHER SUPPORTIVE DRUGS – FOLATE

| Generic Drug Names | | |
|--|---|--|
| B-Complex w/ Folic Acid | B-Complex w/Biotin & Folic Acid | B-Complex w/ C-Zn & Folic Acid |
| B-Complex w/ Lysine-Zn & Folic Acid | B-Complex w/ C-Biotin-Vit E & Folic Acid | B-Complex w/ C & Folic Acid |
| B-Complex w/ C-Biotin-E-Minerals & Folic Acid | Multiple Vitamins with Folic Acid | B-Complex w/ C-Biotin-D & Folic Acid |
| B-Complex w/ C-Biotin-Minerals & Folic Acid | Multiple Vit & Fluoride-Folic Acid | B-Complex w/ C-Biotin-D-Zinc & Folic Acid |
| Multiple Vitamins with Folic Acid | Multiple Vit w/ Min & Calcium-Folic Acid | Ca Carb-Folic Acid-Vit D-B6-B12-Boron-Mag |
| Magnesium-Calcium-Folic Acid | Choline-Inositol-Methionine-Folic Acid | DHA-EPA-Vit B6-B12-Folic Acid |
| Levomefolic Acid (5-MTHF) | Folic Acid-Pyridoxine-Cyanocobalamin | Folic Acid |
| Folic Acid-Vitamin C | Folic Acid-Cholecalciferol | Folic Acid-Vitamin B6-Vitamin B12 |
| Folic Acid-Vit B6-Vit B12-Omega 3-Phytosterols | Folic Acid-Vit B2-Vit B6-Vit B12-Vit C-Cholin | Folic Acid-Cyanocobalamin-Vit B6-Vit D-Calcium-Aloe |
| Folic Acid-Vit B6-Vit B12-Omega 3-Biotin-Cr | Folic Acid-B6-B12-D-Omega 3-Phytosterols | Folic Ac-Vit B2-Vit B6-Vit B12-Vit D-Calc-Phosphorus |

C2: GENERIC DRUG NAMES USED TO IDENTIFY OTHER SUPPORTIVE DRUGS – PENICILLIN

| Generic Drug Names | | |
|--------------------------|------------------------------------|------------------------|
| Penicillin G Benzathine | Penicillin G Procaine | Penicillin V Potassium |
| Amoxicillin (Trihydrate) | Penicillin G Benzathine & Procaine | |

C3: GENERIC DRUG NAMES USED TO IDENTIFY OPIOIDS

| Generic Drug Names | |
|------------------------------------|---------------------------------------|
| Alfentanil | Codeine Sulfate |
| Fentanyl | Fentanyl Citrate |
| Fentanyl Citrate NaCl PF | Fentanyl Citrate PF |
| Fentanyl HCl Iontophoretic | Hydrocodone Bitartrate |
| Hydromorphone HCl | Levorphanol Tartrate |
| Hydromorphone HCl-Sodium Chloride | Meperidine HCl |
| Methadone HCl | Morphine Sulfate |
| Morphine-Naltrexone | Oxycodone |
| Oxycodone HCl | Oxymorphone HCl |
| Propoxyphene HCl | Remifentanyl HCl |
| Sufentanil Citrate | Tapentadol HCl |
| Tramadol HCl | Buprenorphine |
| Butorphanol Tartrate | Nalbuphine HCl |
| Pentazocine Lactate | Pentazocine w/ Naloxone |
| Oxycodone w/ Acetaminophen | Oxycodone w/ Aspirin |
| Oxycodone-Ibuprofen | Acetaminophen w/ Codeine |
| Butalbital-Aspirin-Caff w/ Codeine | Acetaminophen-Caffeine-Dihydrocodeine |
| Aspirin-Caffeine-Dihydrocodeine | Apomorphine hydrochloride |
| Fentanyl Cit-Bupivacaine-NaCl | Hydrocodone-Acetaminophen |
| Hydrocodone-Ibuprofen | Hydromorphone |
| Meperidine w/ Promethazine | Pentazocine-Acetaminophen |
| Tramadol-Acetaminophen | Buprenorphine Hydrochloride |
| Buprenorphine HCl-Naloxone HCl | Buprenorphine-Naloxone |



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