| **Supplementary Table 1: ICD9 and ICD10 Codes** | | | | | |
| --- | --- | --- | --- | --- | --- |
|  | **ICD9** | |  | **ICD10** | |
| **Variables** | **Code** | **Description** |  | **Code** | **Description** |
| **ICD Table** | | | | | |
| **Exposure Variable** | | | | | |
| Protein-Calorie Malnutrition | | | | | |
|  | 262 | Other severe protein-calorie malnutrition |  | E440 | Moderate protein-calorie malnutrition |
|  | 2630 | Malnutrition of moderate degree |  | E441 | Mild protein-calorie malnutrition |
|  | 2631 | Malnutrition of mild degree |  | E43 | Unspecified severe protein-calorie malnutrition |
|  | 2638 | Other protein-calorie malnutrition |  | E46 | Unspecified protein-calorie malnutrition |
|  | 2639 | Unspecified protein-calorie malnutrition |  |  |  |
| Sarcopenia | | | | | |
|  | 7282 | Muscular wasting and disuse atrophy, not elsewhere classified |  | M6284 | Sarcopenia |
|  |  |  |  | M625 | Muscle wasting and atrophy, not elsewhere classified |
|  |  |  |  | M6250 | Muscle wasting and atrophy, not elsewhere classified, unspecified site |
|  |  |  |  | M6251 | Muscle wasting and atrophy, not elsewhere classified, shoulder |
|  |  |  |  | M62511 | Muscle wasting and atrophy, not elsewhere classified, right shoulder |
|  |  |  |  | M62512 | Muscle wasting and atrophy, not elsewhere classified, left shoulder |
|  |  |  |  | M62519 | Muscle wasting and atrophy, not elsewhere classified, unspecified shoulder |
|  |  |  |  | M6252 | Muscle wasting and atrophy, not elsewhere classified, upper arm |
|  |  |  |  | M62521 | Muscle wasting and atrophy, not elsewhere classified, right upper arm |
|  |  |  |  | M62522 | Muscle wasting and atrophy, not elsewhere classified, left upper arm |
|  |  |  |  | M62529 | Muscle wasting and atrophy, not elsewhere classified, unspecified upper arm |
|  |  |  |  | M6253 | Muscle wasting and atrophy, not elsewhere classified, forearm |
|  |  |  |  | M62531 | Muscle wasting and atrophy, not elsewhere classified, right forearm |
|  |  |  |  | M62532 | Muscle wasting and atrophy, not elsewhere classified, left forearm |
|  |  |  |  | M62539 | Muscle wasting and atrophy, not elsewhere classified, unspecified forearm |
|  |  |  |  | M6254 | Muscle wasting and atrophy, not elsewhere classified, hand |
|  |  |  |  | M62541 | Muscle wasting and atrophy, not elsewhere classified, right hand |
|  |  |  |  | M62542 | Muscle wasting and atrophy, not elsewhere classified, left hand |
|  |  |  |  | M62549 | Muscle wasting and atrophy, not elsewhere classified, unspecified hand |
|  |  |  |  | M6255 | Muscle wasting and atrophy, not elsewhere classified, thigh |
|  |  |  |  | M62551 | Muscle wasting and atrophy, not elsewhere classified, right thigh |
|  |  |  |  | M62552 | Muscle wasting and atrophy, not elsewhere classified, left thigh |
|  |  |  |  | M62559 | Muscle wasting and atrophy, not elsewhere classified, unspecified thigh |
|  |  |  |  | M6256 | Muscle wasting and atrophy, not elsewhere classified, lower leg |
|  |  |  |  | M62561 | Muscle wasting and atrophy, not elsewhere classified, right lower leg |
|  |  |  |  | M62562 | Muscle wasting and atrophy, not elsewhere classified, left lower leg |
|  |  |  |  | M62569 | Muscle wasting and atrophy, not elsewhere classified, unspecified lower leg |
|  |  |  |  | M6257 | Muscle wasting and atrophy, not elsewhere classified, ankle and foot |
|  |  |  |  | M62571 | Muscle wasting and atrophy, not elsewhere classified, right ankle and foot |
|  |  |  |  | M62572 | Muscle wasting and atrophy, not elsewhere classified, left ankle and foot |
|  |  |  |  | M62579 | Muscle wasting and atrophy, not elsewhere classified, unspecified ankle and foot |
|  |  |  |  | M6258 | Muscle wasting and atrophy, not elsewhere classified, other site |
|  |  |  |  | M6259 | Muscle wasting and atrophy, not elsewhere classified, multiple sites |
| Underweight | | | | | |
|  | 78322 | Underweight |  | R636 | Underweight |
|  | 78321 | Loss of weight |  | R634 | Abnormal weight loss |
|  | 7994 | Cachexia |  | R64 | Cachexia |
|  | V850 | Body Mass Index less than 19, adult |  | Z681 | Body mass index (BMI) 19.9 or less, adult |
| **Study Cohort** | | | | | |
| Partial Hepatectomy | | | | | |
|  | 5022 | Partial hepatectomy |  | 0FB00ZZ | Excision of Liver, Open Approach |
|  |  |  |  | 0FB03ZZ | Excision of Liver, Percutaneous Approach |
|  |  |  |  | 0FB04ZZ | Excision of Liver, Percutaneous Endoscopic Approach |
|  |  |  |  | 0FB10ZZ | Excision of Right Lobe Liver, Open Approach |
|  |  |  |  | 0FB13ZZ | Excision of Right Lobe Liver, Percutaneous Approach |
|  |  |  |  | 0FB14ZZ | Excision of Right Lobe Liver, Percutaneous Endoscopic Approach |
|  |  |  |  | 0FB20ZZ | Excision of Left Lobe Liver, Open Approach |
|  |  |  |  | 0FB23ZZ | Excision of Left Lobe Liver, Percutaneous Approach |
|  |  |  |  | 0FB24ZZ | Excision of Left Lobe Liver, Percutaneous Endoscopic Approach |
| Total Hepatectomy | | | | | |
|  | 504 | Total hepatectomy |  | 0FT00ZZ | Resection of Liver, Open Approach |
|  |  |  |  | 0FT04ZZ | Resection of Liver, Percutaneous Endoscopic Approach |
| Liver Lobectomy | | | | | |
|  | 503 | Lobectomy of liver |  | 0FT10ZZ | Resection of Right Lobe Liver, Open Approach |
|  |  |  |  | 0FT14ZZ | Resection of Right Lobe Liver, Percutaneous Endoscopic Approach |
|  |  |  |  | 0FT20ZZ | Resection of Left Lobe Liver, Open Approach |
|  |  |  |  | 0FT24ZZ | Resection of Left Lobe Liver, Percutaneous Endoscopic Approach |
| Other Destruction Of The Liver | | | | | |
|  | 5029 | Other destruction of lesion of liver |  | 0F500ZZ | Destruction of Liver, Open Approach |
|  |  |  |  | 0F503ZZ | Destruction of Liver, Percutaneous Approach |
|  |  |  |  | 0F504ZZ | Destruction of Liver, Percutaneous Endoscopic Approach |
|  |  |  |  | 0F510ZZ | Destruction of Right Lobe Liver, Open Approach |
|  |  |  |  | 0F513ZZ | Destruction of Right Lobe Liver, Percutaneous Approach |
|  |  |  |  | 0F514ZZ | Destruction of Right Lobe Liver, Percutaneous Endoscopic Approach |
|  |  |  |  | 0F520ZZ | Destruction of Left Lobe Liver, Open Approach |
|  |  |  |  | 0F523ZZ | Destruction of Left Lobe Liver, Percutaneous Approach |
|  |  |  |  | 0F524ZZ | Destruction of Left Lobe Liver, Percutaneous Endoscopic Approach |
| **Liver Variables** | | | | | |
| Alcoholic Liver Disease | | | | | |
|  | 5710 | Alcoholic fatty liver |  | K70 | Alcoholic liver disease |
|  | 5711 | Acute alcoholic hepatitis |  | K700 | Alcoholic fatty liver |
|  | 5712 | Alcoholic cirrhosis of liver |  | K701 | Alcoholic hepatitis |
|  | 5713 | Alcoholic liver damage, unspecified |  | K7010 | Alcoholic hepatitis without ascites |
|  | 5718 | Other chronic nonalcoholic liver disease |  | K7011 | Alcoholic hepatitis with ascites |
|  |  |  |  | K702 | Alcoholic fibrosis and sclerosis of liver |
|  |  |  |  | K703 | Alcoholic cirrhosis of liver |
|  |  |  |  | K7030 | Alcoholic cirrhosis of liver without ascites |
|  |  |  |  | K7031 | Alcoholic cirrhosis of liver with ascites |
|  |  |  |  | K704 | Alcoholic hepatic failure |
|  |  |  |  | K7040 | Alcoholic hepatic failure without coma |
|  |  |  |  | K7041 | Alcoholic hepatic failure with coma |
|  |  |  |  | K709 | Alcoholic liver disease, unspecified |
| Cirrhosis | | | | | |
|  | 5712 | Alcoholic cirrhosis of liver |  | K7460 | Unspecified cirrhosis of liver |
|  | 5715 | Cirrhosis of liver without mention of alcohol |  | K7469 | Other cirrhosis of liver |
|  |  |  |  | K7030 | Alcoholic cirrhosis of liver without ascites |
|  |  |  |  | K7031 | Alcoholic cirrhosis of liver with ascites |
| Ascites | | | | | |
|  | 78959 | Other ascites |  | R188 | Other ascites |
| Varices | | | | | |
|  | 4560 | Esophageal varices with bleeding |  | I8501 | Esophageal varices with bleeding |
|  | 45620 | Esophageal varices in diseases classified elsewhere, with bleeding |  | I8511 | Secondary esophageal varices with bleeding |
|  | 4561 | Esophageal varices without mention of bleeding |  | I8500 | Esophageal varices without bleeding |
|  | 45621 | Esophageal varices in diseases classified elsewhere, without mention of bleeding |  | I8510 | Secondary esophageal varices without bleeding |
| Hepatocellular Carcinoma | | | | | |
|  | 1550 | Malignant neoplasm of liver, primary |  | C220 | Liver cell carcinoma |
| Cholangiocarcinoma | | | | | |
|  | 1551 | Malignant neoplasm of intrahepatic bile ducts |  | C221 | Intrahepatic bile duct carcinoma |
| Intra-Abdominal Hemangioma | | | | | |
|  | 22804 | Hemangioma of intra-abdominal structures |  | D1803 | Hemangioma of intra-abdominal structures |
| Liver Injury | | | | | |
|  | 86400 | Injury to liver without mention of open wound into cavity, unspecified injury |  | S36112A | Contusion of liver, initial encounter |
|  | 86401 | Injury to liver without mention of open wound into cavity, hematoma and contusion |  | S36113A | Laceration of liver, unspecified degree, initial encounter |
|  | 86402 | Injury to liver without mention of open wound into cavity, laceration, minor |  | S36114A | Minor laceration of liver, initial encounter |
|  | 86403 | Injury to liver without mention of open wound into cavity, laceration, moderate |  | S36115A | Moderate laceration of liver, initial encounter |
|  | 86404 | Injury to liver without mention of open wound into cavity, laceration, major |  | S36116A | Major laceration of liver, initial encounter |
|  | 86405 | Injury to liver without mention of open wound into cavity laceration, unspecified |  | S36118A | Other injury of liver, initial encounter |
|  | 86409 | Other injury to liver without mention of open wound into cavity |  | S36119A | Unspecified injury of liver, initial encounter |
|  | 86410 | Injury to liver with open wound into cavity, unspecified injury |  | S31609A | Unspecified open wound of abdominal wall, unspecified quadrant with penetration into peritoneal cavity, initial encounter |
|  | 86411 | Injury to liver with open wound into cavity, hematoma and contusion |  |  |  |
|  | 86412 | Injury to liver with open wound into cavity, laceration, minor |  |  |  |
|  | 86413 | Injury to liver with open wound into cavity, laceration, moderate |  |  |  |
|  | 86414 | Injury to liver with open wound into cavity, laceration, major |  |  |  |
|  | 86415 | Injury to liver with open wound into cavity, laceration, unspecified |  |  |  |
|  | 86419 | Other injury to liver with open wound into cavity |  |  |  |
| Liver Cyst | | | | | |
|  | 75162 | Congenital cystic disease of liver |  | Q446 | Cystic disease of liver |
| Neuroendocrine Liver Cancer | | | | | |
|  | 20972 | Secondary neuroendocrine tumor of liver |  | C7B02 | Secondary carcinoid tumors of liver |
| Secondary Neuroendocrine Cancer | | | | | |
|  | 20970 | Secondary neuroendocrine tumor, unspecified site |  | C7B | Secondary neuroendocrine tumors |
|  | 20971 | Secondary neuroendocrine tumor of distant lymph nodes |  | C7B00 | Secondary carcinoid tumors, unspecified site |
|  | 20972 | Secondary neuroendocrine tumor of liver |  | C7B01 | Secondary carcinoid tumors of distant lymph nodes |
|  | 20973 | Secondary neuroendocrine tumor of bone |  | C7B02 | Secondary carcinoid tumors of liver |
|  | 20974 | Secondary neuroendocrine tumor of peritoneum |  | C7B03 | Secondary carcinoid tumors of bone |
|  | 20979 | Secondary neuroendocrine tumor of other sites |  | C7B04 | Secondary carcinoid tumors of peritoneum |
|  |  |  |  | C7B09 | Secondary carcinoid tumors of other sites |
|  |  |  |  | C7B8 | Other secondary neuroendocrine tumors |
| Gallbladder Cancer | | | | | |
|  | 1560 | Malignant neoplasm of gallbladder |  | C23 | Malignant neoplasm of gallbladder |
|  | 1568 | Malignant neoplasm of other specified sites of gallbladder and extrahepatic bile ducts |  | C248 | Malignant neoplasm of overlapping sites of biliary tract |
| Liver Abscess | | | | | |
|  | 5720 | Abscess of liver |  | K750 | Abscess of liver |
| Secondary Liver Cancer | | | | | |
|  | 1977 | Malignant neoplasm of liver, secondary |  | C787 | Secondary malignant neoplasm of liver and intrahepatic bile duct |
| Colon Neoplasm | | | | | |
|  | 1531 | Malignant neoplasm of transverse colon |  | C18 | Malignant neoplasm of colon |
|  | 1532 | Malignant neoplasm of descending colon |  | C182 | Malignant neoplasm of ascending colon |
|  | 1533 | Malignant neoplasm of sigmoid colon |  | C184 | Malignant neoplasm of transverse colon |
|  | 1536 | Malignant neoplasm of ascending colon |  | C186 | Malignant neoplasm of descending colon |
|  | 1538 | Malignant neoplasm of other specified sites of large intestine |  | C187 | Malignant neoplasm of sigmoid colon |
|  | 1539 | Malignant neoplasm of colon, unspecified site |  | C188 | Malignant neoplasm of overlapping sites of colon |
|  |  |  |  | C189 | Malignant neoplasm of colon, unspecified |
| Hepatitis B† | | | | | |
|  | 07022 | Chronic viral hepatitis B with hepatic coma without hepatitis delta |  | B180 | Chronic viral hepatitis B with delta-agent |
|  | 07023 | Chronic viral hepatitis B with hepatic coma with hepatitis delta |  | B181 | Chronic viral hepatitis B without delta-agent |
|  | 07032 | Chronic viral hepatitis B without mention of hepatic coma without mention of hepatitis delta |  |  |  |
|  | 07033 | Chronic viral hepatitis B without mention of hepatic coma with hepatitis delta |  |  |  |
| Hepatitis C\* | | | | | |
|  | 07044 | Chronic hepatitis C with hepatic coma |  | B182 | Chronic viral hepatitis C |
|  | 07054 | Chronic hepatitis C without mention of hepatic coma |  |  |  |
| **Endpoints** | | | | | |
| Postoperative Bleeding | | | | | |
|  | 99811 | Hemorrhage complicating a procedure |  | D782 | Postprocedural hemorrhage of the spleen following a procedure |
|  | 99812 | Hematoma complicating a procedure |  | D7821 | Postprocedural hemorrhage of the spleen following a procedure on the spleen |
|  |  |  |  | D7822 | Postprocedural hemorrhage of the spleen following other procedure |
|  |  |  |  | E8981 | Postprocedural hemorrhage of an endocrine system organ or structure following a procedure |
|  |  |  |  | E89810 | Postprocedural hemorrhage of an endocrine system organ or structure following an endocrine system procedure |
|  |  |  |  | E89811 | Postprocedural hemorrhage of an endocrine system organ or structure following other procedure |
|  |  |  |  | G975 | Postprocedural hemorrhage of a nervous system organ or structure following a procedure |
|  |  |  |  | G9751 | Postprocedural hemorrhage of a nervous system organ or structure following a nervous system procedure |
|  |  |  |  | G9752 | Postprocedural hemorrhage of a nervous system organ or structure following other procedure |
|  |  |  |  | H593 | Postprocedural hemorrhage, hematoma, and seroma of eye and adnexa following a procedure |
|  |  |  |  | H5931 | Postprocedural hemorrhage of eye and adnexa following an ophthalmic procedure |
|  |  |  |  | H59311 | Postprocedural hemorrhage of right eye and adnexa following an ophthalmic procedure |
|  |  |  |  | H59312 | Postprocedural hemorrhage of left eye and adnexa following an ophthalmic procedure |
|  |  |  |  | H59313 | Postprocedural hemorrhage of eye and adnexa following an ophthalmic procedure, bilateral |
|  |  |  |  | H59319 | Postprocedural hemorrhage of unspecified eye and adnexa following an ophthalmic procedure |
|  |  |  |  | H5932 | Postprocedural hemorrhage of eye and adnexa following other procedure |
|  |  |  |  | H59321 | Postprocedural hemorrhage of right eye and adnexa following other procedure |
|  |  |  |  | H59322 | Postprocedural hemorrhage of left eye and adnexa following other procedure |
|  |  |  |  | H59323 | Postprocedural hemorrhage of eye and adnexa following other procedure, bilateral |
|  |  |  |  | H59329 | Postprocedural hemorrhage of unspecified eye and adnexa following other procedure |
|  |  |  |  | H954 | Postprocedural hemorrhage of ear and mastoid process following a procedure |
|  |  |  |  | H9541 | Postprocedural hemorrhage of ear and mastoid process following a procedure on the ear and mastoid process |
|  |  |  |  | H9542 | Postprocedural hemorrhage of ear and mastoid process following other procedure |
|  |  |  |  | I976 | Postprocedural hemorrhage, hematoma and seroma of a circulatory system organ or structure following a procedure |
|  |  |  |  | I9761 | Postprocedural hemorrhage of a circulatory system organ or structure following a circulatory system procedure |
|  |  |  |  | I97610 | Postprocedural hemorrhage of a circulatory system organ or structure following a cardiac catheterization |
|  |  |  |  | I97611 | Postprocedural hemorrhage of a circulatory system organ or structure following cardiac bypass |
|  |  |  |  | I97618 | Postprocedural hemorrhage of a circulatory system organ or structure following other circulatory system procedure |
|  |  |  |  | I9762 | Postprocedural hemorrhage, hematoma and seroma of a circulatory system organ or structure following other procedure |
|  |  |  |  | I97620 | Postprocedural hemorrhage of a circulatory system organ or structure following other procedure |
|  |  |  |  | J9583 | Postprocedural hemorrhage of a respiratory system organ or structure following a procedure |
|  |  |  |  | J95830 | Postprocedural hemorrhage of a respiratory system organ or structure following a respiratory system procedure |
|  |  |  |  | J95831 | Postprocedural hemorrhage of a respiratory system organ or structure following other procedure |
|  |  |  |  | K9184 | Postprocedural hemorrhage of a digestive system organ or structure following a procedure |
|  |  |  |  | K91840 | Postprocedural hemorrhage of a digestive system organ or structure following a digestive system procedure |
|  |  |  |  | K91841 | Postprocedural hemorrhage of a digestive system organ or structure following other procedure |
|  |  |  |  | L762 | Postprocedural hemorrhage of skin and subcutaneous tissue following a procedure |
|  |  |  |  | L7621 | Postprocedural hemorrhage of skin and subcutaneous tissue following a dermatologic procedure |
|  |  |  |  | L7622 | Postprocedural hemorrhage of skin and subcutaneous tissue following other procedure |
|  |  |  |  | M9683 | Postprocedural hemorrhage of a musculoskeletal structure following a procedure |
|  |  |  |  | M96830 | Postprocedural hemorrhage of a musculoskeletal structure following a musculoskeletal system procedure |
|  |  |  |  | M96831 | Postprocedural hemorrhage of a musculoskeletal structure following other procedure |
|  |  |  |  | N9982 | Postprocedural hemorrhage of a genitourinary system organ or structure following a procedure |
|  |  |  |  | N99820 | Postprocedural hemorrhage of a genitourinary system organ or structure following a genitourinary system procedure |
|  |  |  |  | N99821 | Postprocedural hemorrhage of a genitourinary system organ or structure following other procedure |
|  |  |  |  | D783 | Postprocedural hematoma and seroma of the spleen following a procedure |
|  |  |  |  | D7831 | Postprocedural hematoma of the spleen following a procedure on the spleen |
|  |  |  |  | D7832 | Postprocedural hematoma of the spleen following other procedure |
|  |  |  |  | E8982 | Postprocedural hematoma and seroma of an endocrine system organ or structure |
|  |  |  |  | E89820 | Postprocedural hematoma of an endocrine system organ or structure following an endocrine system procedure |
|  |  |  |  | E89821 | Postprocedural hematoma of an endocrine system organ or structure following other procedure |
|  |  |  |  | G976 | Postprocedural hematoma and seroma of a nervous system organ or structure following a procedure |
|  |  |  |  | G9761 | Postprocedural hematoma of a nervous system organ or structure following a nervous system procedure |
|  |  |  |  | G9762 | Postprocedural hematoma of a nervous system organ or structure following other procedure |
|  |  |  |  | H5933 | Postprocedural hematoma of eye and adnexa following an ophthalmic procedure |
|  |  |  |  | H59331 | Postprocedural hematoma of right eye and adnexa following an ophthalmic procedure |
|  |  |  |  | H59332 | Postprocedural hematoma of left eye and adnexa following an ophthalmic procedure |
|  |  |  |  | H59333 | Postprocedural hematoma of eye and adnexa following an ophthalmic procedure, bilateral |
|  |  |  |  | H59339 | Postprocedural hematoma of unspecified eye and adnexa following an ophthalmic procedure |
|  |  |  |  | H5934 | Postprocedural hematoma of eye and adnexa following other procedure |
|  |  |  |  | H59341 | Postprocedural hematoma of right eye and adnexa following other procedure |
|  |  |  |  | H59342 | Postprocedural hematoma of left eye and adnexa following other procedure |
|  |  |  |  | H59343 | Postprocedural hematoma of eye and adnexa following other procedure, bilateral |
|  |  |  |  | H59349 | Postprocedural hematoma of unspecified eye and adnexa following other procedure |
|  |  |  |  | H955 | Postprocedural hematoma and seroma of ear and mastoid process following a procedure |
|  |  |  |  | H9551 | Postprocedural hematoma of ear and mastoid process following a procedure on the ear and mastoid process |
|  |  |  |  | H9552 | Postprocedural hematoma of ear and mastoid process following other procedure |
|  |  |  |  | I97621 | Postprocedural hematoma of a circulatory system organ or structure following other procedure |
|  |  |  |  | I9763 | Postprocedural hematoma of a circulatory system organ or structure following a circulatory system procedure |
|  |  |  |  | I97630 | Postprocedural hematoma of a circulatory system organ or structure following a cardiac catheterization |
|  |  |  |  | I97631 | Postprocedural hematoma of a circulatory system organ or structure following cardiac bypass |
|  |  |  |  | I97638 | Postprocedural hematoma of a circulatory system organ or structure following other circulatory system procedure |
|  |  |  |  | J9586 | Postprocedural hematoma and seroma of a respiratory system organ or structure following a procedure |
|  |  |  |  | J95860 | Postprocedural hematoma of a respiratory system organ or structure following a respiratory system procedure |
|  |  |  |  | J95861 | Postprocedural hematoma of a respiratory system organ or structure following other procedure |
|  |  |  |  | K9187 | Postprocedural hematoma and seroma of a digestive system organ or structure following a procedure |
|  |  |  |  | K91870 | Postprocedural hematoma of a digestive system organ or structure following a digestive system procedure |
|  |  |  |  | K91871 | Postprocedural hematoma of a digestive system organ or structure following other procedure |
|  |  |  |  | L763 | Postprocedural hematoma and seroma of skin and subcutaneous tissue following a procedure |
|  |  |  |  | L7631 | Postprocedural hematoma of skin and subcutaneous tissue following a dermatologic procedure |
|  |  |  |  | L7632 | Postprocedural hematoma of skin and subcutaneous tissue following other procedure |
|  |  |  |  | M9684 | Postprocedural hematoma and seroma of a musculoskeletal structure following a procedure |
|  |  |  |  | M96840 | Postprocedural hematoma of a musculoskeletal structure following a musculoskeletal system procedure |
|  |  |  |  | M96841 | Postprocedural hematoma of a musculoskeletal structure following other procedure |
|  |  |  |  | N9984 | Postprocedural hematoma and seroma of a genitourinary system organ or structure following a procedure |
|  |  |  |  | N99840 | Postprocedural hematoma of a genitourinary system organ or structure following a genitourinary system procedure |
|  |  |  |  | N99841 | Postprocedural hematoma of a genitourinary system organ or structure following other procedure |
| Postoperative Respiratory Failure | | | | | |
|  | 51851 | Acute respiratory failure following trauma and surgery |  | J9582 | Postprocedural respiratory failure |
|  | 51853 | Acute and chronic respiratory failure following trauma and surgery |  | J95821 | Acute postprocedural respiratory failure |
|  |  |  |  | J95822 | Acute and chronic postprocedural respiratory failure |
| General Infection Complications | | | | | |
|  | 99851 | Infected postoperative seroma |  | T814 | Infection following a procedure |
|  | 99859 | Other postoperative infection |  |  |  |
| Hematoma | | | | | |
|  | 99812 | Hematoma complicating a procedure |  | D783 | Postprocedural hematoma and seroma of the spleen following a procedure |
|  |  |  |  | D7831 | Postprocedural hematoma of the spleen following a procedure on the spleen |
|  |  |  |  | D7832 | Postprocedural hematoma of the spleen following other procedure |
|  |  |  |  | E8982 | Postprocedural hematoma and seroma of an endocrine system organ or structure |
|  |  |  |  | E89820 | Postprocedural hematoma of an endocrine system organ or structure following an endocrine system procedure |
|  |  |  |  | E89821 | Postprocedural hematoma of an endocrine system organ or structure following other procedure |
|  |  |  |  | G976 | Postprocedural hematoma and seroma of a nervous system organ or structure following a procedure |
|  |  |  |  | G9761 | Postprocedural hematoma of a nervous system organ or structure following a nervous system procedure |
|  |  |  |  | G9762 | Postprocedural hematoma of a nervous system organ or structure following other procedure |
|  |  |  |  | H5933 | Postprocedural hematoma of eye and adnexa following an ophthalmic procedure |
|  |  |  |  | H59331 | Postprocedural hematoma of right eye and adnexa following an ophthalmic procedure |
|  |  |  |  | H59332 | Postprocedural hematoma of left eye and adnexa following an ophthalmic procedure |
|  |  |  |  | H59333 | Postprocedural hematoma of eye and adnexa following an ophthalmic procedure, bilateral |
|  |  |  |  | H59339 | Postprocedural hematoma of unspecified eye and adnexa following an ophthalmic procedure |
|  |  |  |  | H5934 | Postprocedural hematoma of eye and adnexa following other procedure |
|  |  |  |  | H59341 | Postprocedural hematoma of right eye and adnexa following other procedure |
|  |  |  |  | H59342 | Postprocedural hematoma of left eye and adnexa following other procedure |
|  |  |  |  | H59343 | Postprocedural hematoma of eye and adnexa following other procedure, bilateral |
|  |  |  |  | H59349 | Postprocedural hematoma of unspecified eye and adnexa following other procedure |
|  |  |  |  | H955 | Postprocedural hematoma and seroma of ear and mastoid process following a procedure |
|  |  |  |  | H9551 | Postprocedural hematoma of ear and mastoid process following a procedure on the ear and mastoid process |
|  |  |  |  | H9552 | Postprocedural hematoma of ear and mastoid process following other procedure |
|  |  |  |  | I97621 | Postprocedural hematoma of a circulatory system organ or structure following other procedure |
|  |  |  |  | I9763 | Postprocedural hematoma of a circulatory system organ or structure following a circulatory system procedure |
|  |  |  |  | I97630 | Postprocedural hematoma of a circulatory system organ or structure following a cardiac catheterization |
|  |  |  |  | I97631 | Postprocedural hematoma of a circulatory system organ or structure following cardiac bypass |
|  |  |  |  | I97638 | Postprocedural hematoma of a circulatory system organ or structure following other circulatory system procedure |
|  |  |  |  | J9586 | Postprocedural hematoma and seroma of a respiratory system organ or structure following a procedure |
|  |  |  |  | J95860 | Postprocedural hematoma of a respiratory system organ or structure following a respiratory system procedure |
|  |  |  |  | J95861 | Postprocedural hematoma of a respiratory system organ or structure following other procedure |
|  |  |  |  | K9187 | Postprocedural hematoma and seroma of a digestive system organ or structure following a procedure |
|  |  |  |  | K91870 | Postprocedural hematoma of a digestive system organ or structure following a digestive system procedure |
|  |  |  |  | K91871 | Postprocedural hematoma of a digestive system organ or structure following other procedure |
|  |  |  |  | L763 | Postprocedural hematoma and seroma of skin and subcutaneous tissue following a procedure |
|  |  |  |  | L7631 | Postprocedural hematoma of skin and subcutaneous tissue following a dermatologic procedure |
|  |  |  |  | L7632 | Postprocedural hematoma of skin and subcutaneous tissue following other procedure |
|  |  |  |  | M9684 | Postprocedural hematoma and seroma of a musculoskeletal structure following a procedure |
|  |  |  |  | M96840 | Postprocedural hematoma of a musculoskeletal structure following a musculoskeletal system procedure |
|  |  |  |  | M96841 | Postprocedural hematoma of a musculoskeletal structure following other procedure |
|  |  |  |  | N9984 | Postprocedural hematoma and seroma of a genitourinary system organ or structure following a procedure |
|  |  |  |  | N99840 | Postprocedural hematoma of a genitourinary system organ or structure following a genitourinary system procedure |
|  |  |  |  | N99841 | Postprocedural hematoma of a genitourinary system organ or structure following other procedure |
| Postoperative Hemorrhage | | | | | |
|  | 99811 | Hemorrhage complicating a procedure |  | D782 | Postprocedural hemorrhage of the spleen following a procedure |
|  |  |  |  | D7821 | Postprocedural hemorrhage of the spleen following a procedure on the spleen |
|  |  |  |  | D7822 | Postprocedural hemorrhage of the spleen following other procedure |
|  |  |  |  | E8981 | Postprocedural hemorrhage of an endocrine system organ or structure following a procedure |
|  |  |  |  | E89810 | Postprocedural hemorrhage of an endocrine system organ or structure following an endocrine system procedure |
|  |  |  |  | E89811 | Postprocedural hemorrhage of an endocrine system organ or structure following other procedure |
|  |  |  |  | G975 | Postprocedural hemorrhage of a nervous system organ or structure following a procedure |
|  |  |  |  | G9751 | Postprocedural hemorrhage of a nervous system organ or structure following a nervous system procedure |
|  |  |  |  | G9752 | Postprocedural hemorrhage of a nervous system organ or structure following other procedure |
|  |  |  |  | H593 | Postprocedural hemorrhage, hematoma, and seroma of eye and adnexa following a procedure |
|  |  |  |  | H5931 | Postprocedural hemorrhage of eye and adnexa following an ophthalmic procedure |
|  |  |  |  | H59311 | Postprocedural hemorrhage of right eye and adnexa following an ophthalmic procedure |
|  |  |  |  | H59312 | Postprocedural hemorrhage of left eye and adnexa following an ophthalmic procedure |
|  |  |  |  | H59313 | Postprocedural hemorrhage of eye and adnexa following an ophthalmic procedure, bilateral |
|  |  |  |  | H59319 | Postprocedural hemorrhage of unspecified eye and adnexa following an ophthalmic procedure |
|  |  |  |  | H5932 | Postprocedural hemorrhage of eye and adnexa following other procedure |
|  |  |  |  | H59321 | Postprocedural hemorrhage of right eye and adnexa following other procedure |
|  |  |  |  | H59322 | Postprocedural hemorrhage of left eye and adnexa following other procedure |
|  |  |  |  | H59323 | Postprocedural hemorrhage of eye and adnexa following other procedure, bilateral |
|  |  |  |  | H59329 | Postprocedural hemorrhage of unspecified eye and adnexa following other procedure |
|  |  |  |  | H954 | Postprocedural hemorrhage of ear and mastoid process following a procedure |
|  |  |  |  | H9541 | Postprocedural hemorrhage of ear and mastoid process following a procedure on the ear and mastoid process |
|  |  |  |  | H9542 | Postprocedural hemorrhage of ear and mastoid process following other procedure |
|  |  |  |  | I976 | Postprocedural hemorrhage, hematoma and seroma of a circulatory system organ or structure following a procedure |
|  |  |  |  | I9761 | Postprocedural hemorrhage of a circulatory system organ or structure following a circulatory system procedure |
|  |  |  |  | I97610 | Postprocedural hemorrhage of a circulatory system organ or structure following a cardiac catheterization |
|  |  |  |  | I97611 | Postprocedural hemorrhage of a circulatory system organ or structure following cardiac bypass |
|  |  |  |  | I97618 | Postprocedural hemorrhage of a circulatory system organ or structure following other circulatory system procedure |
|  |  |  |  | I9762 | Postprocedural hemorrhage, hematoma and seroma of a circulatory system organ or structure following other procedure |
|  |  |  |  | I97620 | Postprocedural hemorrhage of a circulatory system organ or structure following other procedure |
|  |  |  |  | J9583 | Postprocedural hemorrhage of a respiratory system organ or structure following a procedure |
|  |  |  |  | J95830 | Postprocedural hemorrhage of a respiratory system organ or structure following a respiratory system procedure |
|  |  |  |  | J95831 | Postprocedural hemorrhage of a respiratory system organ or structure following other procedure |
|  |  |  |  | K9184 | Postprocedural hemorrhage of a digestive system organ or structure following a procedure |
|  |  |  |  | K91840 | Postprocedural hemorrhage of a digestive system organ or structure following a digestive system procedure |
|  |  |  |  | K91841 | Postprocedural hemorrhage of a digestive system organ or structure following other procedure |
|  |  |  |  | L762 | Postprocedural hemorrhage of skin and subcutaneous tissue following a procedure |
|  |  |  |  | L7621 | Postprocedural hemorrhage of skin and subcutaneous tissue following a dermatologic procedure |
|  |  |  |  | L7622 | Postprocedural hemorrhage of skin and subcutaneous tissue following other procedure |
|  |  |  |  | M9683 | Postprocedural hemorrhage of a musculoskeletal structure following a procedure |
|  |  |  |  | M96830 | Postprocedural hemorrhage of a musculoskeletal structure following a musculoskeletal system procedure |
|  |  |  |  | M96831 | Postprocedural hemorrhage of a musculoskeletal structure following other procedure |
|  |  |  |  | N9982 | Postprocedural hemorrhage of a genitourinary system organ or structure following a procedure |
|  |  |  |  | N99820 | Postprocedural hemorrhage of a genitourinary system organ or structure following a genitourinary system procedure |
|  |  |  |  | N99821 | Postprocedural hemorrhage of a genitourinary system organ or structure following other procedure |
| Postoperative Infection‡ | | | | | |
|  | 99851 | Infected postoperative seroma |  | T814 | Infection following a procedure |
|  | 99859 | Other postoperative infection |  |  |  |
| Postoperative Wound Complications | | | | | |
|  | 99830 | Disruption of wound, unspecified |  | T813 | Disruption of wound, not elsewhere classified |
|  | 99831 | Disruption of internal operation (surgical) wound |  | T8130 | Disruption of wound, unspecified |
|  | 99832 | Disruption of external operation (surgical) wound |  | T8130XA | Disruption of wound, unspecified, initial encounter |
|  | 99833 | Disruption of traumatic injury wound repair |  | T8130XD | Disruption of wound, unspecified, subsequent encounter |
|  | 9986 | Persistent postoperative fistula |  | T8130XS | Disruption of wound, unspecified, sequela |
|  |  |  |  | T8131 | Disruption of external operation (surgical) wound, not elsewhere classified |
|  |  |  |  | T8131XA | Disruption of external operation (surgical) wound, not elsewhere classified, initial encounter |
|  |  |  |  | T8131XD | Disruption of external operation (surgical) wound, not elsewhere classified, subsequent encounter |
|  |  |  |  | T8131XS | Disruption of external operation (surgical) wound, not elsewhere classified, sequela |
|  |  |  |  | T8132 | Disruption of internal operation (surgical) wound, not elsewhere classified |
|  |  |  |  | T8132XA | Disruption of internal operation (surgical) wound, not elsewhere classified, initial encounter |
|  |  |  |  | T8132XD | Disruption of internal operation (surgical) wound, not elsewhere classified, subsequent encounter |
|  |  |  |  | T8132XS | Disruption of internal operation (surgical) wound, not elsewhere classified, sequela |
|  |  |  |  | T8133 | Disruption of traumatic injury wound repair |
|  |  |  |  | T8133XA | Disruption of traumatic injury wound repair, initial encounter |
|  |  |  |  | T8133XD | Disruption of traumatic injury wound repair, subsequent encounter |
|  |  |  |  | T8133XS | Disruption of traumatic injury wound repair, sequela |
|  |  |  |  | T8183 | Persistent postprocedural fistula |
|  |  |  |  | T8183XA | Persistent postprocedural fistula, initial encounter |
|  |  |  |  | T8183XD | Persistent postprocedural fistula, subsequent encounter |
|  |  |  |  | T8183XS | Persistent postprocedural fistula, sequela |
| Postoperative Wound Complications | | | | | |
|  | 99830 | Disruption of wound, unspecified |  | T813 | Disruption of wound, not elsewhere classified |
|  | 99831 | Disruption of internal operation (surgical) wound |  | T8130 | Disruption of wound, unspecified |
|  | 99832 | Disruption of external operation (surgical) wound |  | T8130XA | Disruption of wound, unspecified, initial encounter |
|  | 99833 | Disruption of traumatic injury wound repair |  | T8130XD | Disruption of wound, unspecified, subsequent encounter |
|  | 9986 | Persistent postoperative fistula |  | T8130XS | Disruption of wound, unspecified, sequela |
|  |  |  |  | T8131 | Disruption of external operation (surgical) wound, not elsewhere classified |
|  |  |  |  | T8131XA | Disruption of external operation (surgical) wound, not elsewhere classified, initial encounter |
|  |  |  |  | T8131XD | Disruption of external operation (surgical) wound, not elsewhere classified, subsequent encounter |
|  |  |  |  | T8131XS | Disruption of external operation (surgical) wound, not elsewhere classified, sequela |
|  |  |  |  | T8132 | Disruption of internal operation (surgical) wound, not elsewhere classified |
|  |  |  |  | T8132XA | Disruption of internal operation (surgical) wound, not elsewhere classified, initial encounter |
|  |  |  |  | T8132XD | Disruption of internal operation (surgical) wound, not elsewhere classified, subsequent encounter |
|  |  |  |  | T8132XS | Disruption of internal operation (surgical) wound, not elsewhere classified, sequela |
|  |  |  |  | T8133 | Disruption of traumatic injury wound repair |
|  |  |  |  | T8133XA | Disruption of traumatic injury wound repair, initial encounter |
|  |  |  |  | T8133XD | Disruption of traumatic injury wound repair, subsequent encounter |
|  |  |  |  | T8133XS | Disruption of traumatic injury wound repair, sequela |
|  |  |  |  | T8183 | Persistent postprocedural fistula |
|  |  |  |  | T8183XA | Persistent postprocedural fistula, initial encounter |
|  |  |  |  | T8183XD | Persistent postprocedural fistula, subsequent encounter |
|  |  |  |  | T8183XS | Persistent postprocedural fistula, sequela |
| Respiratory Failure Complications | | | | | |
|  | 51851 | Acute respiratory failure following trauma and surgery |  | J9582 | Postprocedural respiratory failure |
|  | 51853 | Acute and chronic respiratory failure following trauma and surgery |  | J95821 | Acute postprocedural respiratory failure |
|  |  |  |  | J95822 | Acute and chronic postprocedural respiratory failure |
| \* Chronic Hepatitis C Only | | | | | |
| † Chronic Hepatitis B Only | | | | | |
| ‡ Infection Following Procedure | | | | | |