

**Supplementary Table 1 International classification of diseases-10 code diagnostic and procedural codes**

<b>Variable</b>	<b>ICD-10 code diagnostic and procedural codes</b>
Johns Hopkin's adjusted clinical groups	
frailty indicator	
Protein Energy Malnutrition	E41, E43, E44x, E45, E46
Dementia	F01x, F02x, F03x, F05x, G30x, G310x
Blindness	H540, H541x, H548
Decubitus ulcer	L89x
Bladder discomfort	N31x, N364x, N3942, N3945, N3946
Fecal incontinence	R15x
Failure to thrive	R627, R630, R633, R634
Housing problem	Z590, Z591, Z594, Z597, Z598, Z599, Z74x, Z750, Z751, Z753, Z754, Y93E, Y93F, Y93G
Gait instability	R26x, R27x, Z993
Fall	W000XXA, W001XXA, W002XXA, W009XXA, W010XXA, W0110XA, W01110A, W01111A, W01118A, W03XXXA, W04XXXA, W050XXA, W052XXA, W06XXXA, W07XXXA, W08XXXA, W100XXA, W101XXA, W102XXA, W108XXA, W109XXA, W1781XA, W1789XA, W1800XA,

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	W1801XA, W1802XA, W1809XA, W1811XA, W1812XA, W1831XA, W1839XA, W1840XA, W1841XA, W1842XA, W1849XA, W19XXXA
ERCP	0FJB8ZZ, 0FJD8ZZ, 0FB58ZX, 0FB68ZX, 0FB88ZX 0FB98ZX, 0FBC8ZZ, 4A0C8BZ, 0F558ZZ, 0F568ZZ, 0F588ZZ, 0F598ZZ, 0F5C8ZZ, 0FB58ZZ, 0FB68ZZ, 0FB88ZZ, 0FB98ZZ, 0FBC8ZZ, 0F758ZZ, 0F768ZZ, 0F788ZZ, 0F798ZZ, 0F7C8ZZ, 0F9C8ZZ, 0F9580Z, 0F9680Z, 0F9880Z, 0F9980Z, 0F9C80Z, 0F758DZ, 0F9580Z, 0F9680Z, 0F9880Z, 0F9980Z, 0F9C80Z, 0FC58ZZ, 0FC68ZZ, 0FC88ZZ, 0FC98ZZ, 0FCC8ZZ, 0FF58ZZ, 0FF68ZZ, 0FF88ZZ, 0FF98ZZ, 0FFC8ZZ, 0FJD8ZZ, 0FBD8ZX, 0FBF8ZX, 0F5D8ZZ, 0F5F8ZZ, 0FBD8ZZ, 0FBF8ZZ, 0F7D8DZ, 0F7F8DZ, 0F9D80Z, 0F9F80Z, 0FCD8ZZ, 0FCF8ZZ, 0FFD8ZZ, 0FFF8ZZ, 0F9D80Z, 0F9F80Z, 0F7D8ZZ, 0F7F8ZZ
Choledocholithiasis	K8030, K8031, K8032, K8033, K8034, K8035, K8036, K8037, K8040, K8041, K8042, K8043, K8044, K8045, K8046, K8047, K8060, K8061, K8062, K8063, K8064, K8065, K8066, K8067, K8050, K8051, K8070, K8071

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Biliary Pancreatitis	K8510, K8511, K8512
Cholangitis	K830x
Biliary Stricture	K831
Pancreato-biliary cancer	D015, C250, C251, C252, C253, C254, C257, C258, C259, C240, C241, C248, C249, C221, D136, D376, C23
Idiopathic Pancreatitis	K8500, K8501, K8502, K859x, K858x
Abnormal Liver Function Test	R945, R740, R17
Pancreatic Pseudocyst	K863
Mechanical Ventilation	5A1935Z, 5A1945Z, 5A1955Z
Shock	3E030XZ, 3E033XZ, 3E040XZ, 3E043XZ, 3E050XZ, 3E053XZ, 3E060XZ, 3E063XZ
Stent Placement	0FHB8DZ, 0FHD8DZ
Sphincterotomy	0FBC8ZX, 0FB98ZX, 0FB98ZZ, 0FBC8ZZ
Post-procedural shock	T8119XA, T8110XA, T8111XA, T8112XA
Post- procedural hemorrhage	K91840, K91870
Intra- procedural hemorrhage	K9161
Intra- procedural puncture/laceration	K9171
Post- ERCP Pancreatitis	K9189, K8580, K8590, K8581, K8591, K8582, K8592

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ICD-10: International classification of diseases-10; ERCP: Endoscopic Retrograde Cholangiopancreatography.