

APPENDIX: Codes Used to Indentify Sample and Patient Characteristics and Outcomes

ICD-9-CM Diagnosis codes used to identify the study sample

Diagnosis	Code(s)	Description
Breast Cancer	174.xx	Malignant neoplasms of female breast
	238.3x	Neoplasm of uncertain behavior of other and unspecified sites and tissues, breast
	239.3x	Neoplasm of unspecified behavior, breast
	V10.3	Personal history of malignant neoplasm, breast
Distant Metastases	155.xx	Malignant neoplasms of liver
	162.xx	Malignant neoplasms of lung
	170.xx	Malignant neoplasms of bone
	191.xx	Malignant neoplasms of brain
	192.xx	Malignant neoplasms of other and unspecified parts of nervous system
	196.xx	Secondary and unspecified malignant neoplasm of lymph nodes
	197.xx	Secondary malignant neoplasm of respiratory and digestive systems
	198.xx	Secondary malignant neoplasm of other specified sites
199.xx	Malignant neoplasms without specification of site	

ICD-9-CM=International Classification of Disease, 9th Edition, Clinical Modification. NOTE: “.x” and “.xx” indicates a single or double wildcard (e.g., “174.xx” indicates any 3-5 digit diagnosis code beginning with 174)

CPT-4/HCPCS Procedure codes used to identify medications

Medication	Code(s)
Trastuzumab	J9355
Anastrozole	S0170
Exemestane	S0156
Fulvestrant	J9395
Tamoxifen	S0187
Capecitabine	J8520, J8521
Carboplatin	J99045
Docetaxel	J9170
Gemcitabine	J9201
Paclitaxel	C9431, J9264, J92655
Vinorelbine	J9390
Anthracyclines	C9424, J9151, C9415, J9000, J9001, J9178, J9180, C9249, J9211, J9357
Ixabepilone	J9207

Medication	Code(s)
Other chemotherapy	36640, 99555, J9010, S0087, J9999, J9261, J9017, C9012, J9020, C9218, J9025, S0168, J9035, S0116, C9417, J9040, J9041, C9207, S0115, J0594, J8510, C1178, J8520, J8521, J9045, C9437, J9050, J9055, Q0085, Q0084, Q0083, C8955 , C8954, C8953, S0172, C9418, J9060, J9062, C9419, J9065, J9027, C9421, J8530, J9070, J9080, C9422, J9100, J9110 , J9098, C1166, C9423, J9130, J9140, J9120, J9150, C9424, J9151, J0894, J9170, C9415, J9000, J9001, J9178, J9180 , C1167, C9414, C9425, J8560, J9181, J9182, C9426, J9200, J9185, J9190, J9201, J9210, S9329, S9330, S9331, S0176 , C9429, J9211, C9427, J9208, J9206, S0178, C9017, J9230, J8600, J9245, S0108, C9428, J9209, J8610, J9250, J9260 , C9432, J9280, J9290, J9291, J9293, J8999, J9263, C9205, C9431, J9264, J9265, J9266, J9305, J9268, J9270, J9600 , S0182, J9320, J8700, C1086, Q2017, C9433, J9340, J9350, J3305, J9357, J9360, J9370, J9375, J9380, J9390, C9440 , V672, V662, V5811, V5812, V0739, V672, V662, V5811, V5812, V0739

CPT-4=Current Procedural Terminology, Version 4. HCPCS=Healthcare Common Procedure Coding System.

Codes used to identify comorbidities

Comorbidity	Code Type	Code	Description
Diabetes	ICD-9-CM Dx	250.XX	Diabetes mellitus
Hypertension	ICD-9-CM Dx	401.XX	Essential hypertension
Hypertension	ICD-9-CM Dx	402.XX	Hypertensive heart disease
Hypertension	ICD-9-CM Dx	403.XX	Hypertensive renal disease
Hypertension	ICD-9-CM Dx	404.XX	Hypertensive heart and renal disease
Hypertension	ICD-9-CM Dx	405.XX	Secondary hypertension
CHD	ICD-9-CM Dx	410.XX	Acute myocardial infarction
CHD	ICD-9-CM Dx	411.XX	Other acute and subacute forms of ischemic heart disease
CHD	ICD-9-CM Dx	412.XX	Old myocardial infarction
CHD	ICD-9-CM Dx	413.XX	Angina pectoris
CHD	ICD-9-CM Dx	414.XX	Other forms of chronic ischemic heart disease
COPD	ICD-9-CM Dx	491.XX	Chronic bronchitis
COPD	ICD-9-CM Dx	492.XX	Emphysema
COPD	ICD-9-CM Dx	496.XX	Chronic airway obstruction, not elsewhere classified
Liver disease	ICD-9-CM Dx	006.3	Amebic liver abscess
Liver disease	ICD-9-CM Dx	070.XX	Viral hepatitis
Liver disease	ICD-9-CM Dx	456.0X-456.2X	Esophageal varices
Liver disease	ICD-9-CM Dx	570.XX	Acute and subacute necrosis of liver
Liver disease	ICD-9-CM Dx	571.XX	Chronic liver disease and cirrhosis

Comorbidity	Code Type	Code	Description
Liver disease	ICD-9-CM Dx	572.XX	Liver abscess and sequelae of chronic liver disease
Liver disease	ICD-9-CM Dx	573.XX	Other disorders of liver
Liver disease	ICD-9-CM Dx	996.82	Complications of transplanted organ, liver
Liver disease	ICD-9-CM Dx	V42.7	Organ or tissue replaced by transplant, liver
Liver disease	ICD-9-CM Px	50.5X	Liver transplant
Liver disease	CPT-4	39.27	Liver transplantation
Liver disease	CPT-4	39.42	Liver repair
Liver disease	CPT-4	39.95	Laparoscopy of liver
Liver disease	CPT-4	54.98	Other procedures on liver
Renal disease	ICD-9-CM Dx	55.6X	Anemia in end-stage renal disease
Renal disease	ICD-9-CM Dx	47133-47147	Hypotension of hemodialysis
Renal disease	ICD-9-CM Dx	47300-47362	Chronic glomerulonephritis
Renal disease	ICD-9-CM Dx	47370-47379	Nephritis and nephropathy, not specified as acute or chronic
Renal disease	ICD-9-CM Dx	47380-47399	Acute renal failure
Renal disease	ICD-9-CM Dx	285.21	Chronic renal failure
Renal disease	ICD-9-CM Dx	458.21	Renal failure, unspecified
Renal disease	ICD-9-CM Dx	582.XX	Disorders resulting from impaired renal function
Renal disease	ICD-9-CM Dx	583.XX	Chronic pyelonephritis

Comorbidity	Code Type	Code	Description
Renal disease	ICD-9-CM Dx	584.XX	Renal and perinephric abscess
Renal disease	ICD-9-CM Dx	585.XX	Vesicoureteral reflux
Renal disease	ICD-9-CM Dx	586.XX	Other complications of internal (biological) (synthetic) prosthetic device, implant, and graft, due to renal dialysis device, implant, and graft
Renal disease	ICD-9-CM Dx	588.XX	Complications of transplanted organ, kidney
Renal disease	ICD-9-CM Dx	590.0X	Organ or tissue replaced by transplant, kidney
Renal disease	ICD-9-CM Dx	590.2	Other postprocedural states, renal dialysis status
Renal disease	ICD-9-CM Dx	593.71-593.73	Encounter for dialysis and dialysis catheter care
Renal disease	ICD-9-CM Dx	996.73	Other procedures, without mention of misadventure at the time of procedure, as the cause of abnormal reaction of patient, or of later complication, kidney dialysis
Renal disease	ICD-9-CM Px	996.81	Venous catheterization for renal dialysis
Renal disease	ICD-9-CM Px	V42.0	Arteriovenostomy for renal dialysis

Comorbidity	Code Type	Code	Description
Renal disease	ICD-9-CM Px	V45.1	Revision of arteriovenous shunt for renal dialysis
Renal disease	ICD-9-CM Px	V56.X	Hemodialysis
Renal disease	ICD-9-CM Px	E879.1	Peritoneal dialysis
Renal disease	ICD-9-CM Px	38.95	Transplant of kidney
Renal disease	CPT-4	36145	Arteriovenous shunt created for dialysis (cannula, fistula, or graft)
Renal disease	CPT-4	36800-36870	Hemodialysis access, intravascular cannulation for extracorporeal circulation, or shunt insertion
Renal disease	CPT-4	90918-90999	Dialysis services
Renal disease	CPT-4	93990	Duplex scan of hemodialysis access (including arterial inflow, body of access and venous outflow)
Renal disease	CPT-4	99512	Home visit for hemodialysis
Renal disease	HCPCS	A4651-A4929	Supplies for end-stage renal disease/dialysis
Renal disease	HCPCS	C1750	Hemodialysis catheters
Renal disease	HCPCS	C1752	Hemodialysis catheters
Renal disease	HCPCS	C1881	Dialysis access system (implantable)
Renal disease	HCPCS	E1500-E1699	Artificial kidney machines and accessories

Comorbidity	Code Type	Code	Description
Renal disease	HCPCS	G0257	Unscheduled or emergency dialysis treatment for an end-stage renal disease patient in a hospital outpatient department that is not certified as an end-stage renal disease facility
Renal disease	HCPCS	G0308-G0327	End-stage renal disease related services
Renal disease	HCPCS	G8075-G8082	Encounter for end-stage renal disease
Renal disease	Revenue	800-809	Inpatient renal dialysis
Renal disease	Revenue	820-829	Hemodialysis-outpatient or home
Renal disease	Revenue	830-839	Peritoneal dialysis-outpatient or home
Renal disease	Revenue	840-849	Continuous ambulatory peritoneal dialysis-outpatient or home
Renal disease	Revenue	850-859	Continuous cycling peritoneal dialysis-outpatient or home
Renal disease	Revenue	880-889	Miscellaneous dialysis-related codes
Depression	ICD-9-CM Dx	290.21	Senile dementia with depressive features
Depression	ICD-9-CM Dx	292.84	Drug-induced mood disorder, depressive state induced by drugs
Depression	ICD-9-CM Dx	296.3X	Major depressive disorder, recurrent episode

Comorbidity	Code Type	Code	Description
Depression	ICD-9-CM Dx	296.5X	Bipolar I disorder, most recent episode (or current), depressed
Depression	ICD-9-CM Dx	296.6X	Bipolar I disorder, most recent episode (or current), mixed
Depression	ICD-9-CM Dx	296.82	Atypical depressive disorder
Depression	ICD-9-CM Dx	298.0	Depressive type psychosis
Depression	ICD-9-CM Dx	300.4	Dysthymic disorder
Depression	ICD-9-CM Dx	309.0	Adjustment disorder with depressed mood
Depression	ICD-9-CM Dx	309.1	Prolonged depressive reaction
Depression	ICD-9-CM Dx	311.XX	Depressive disorder, not elsewhere classified

CHD=Coronary heart disease. COPD=Chronic obstructive pulmonary disease. CPT-4=Current Procedural Terminology, Version 4. Dx=Diagnosis. HCPCS=Healthcare Common Procedure Coding System. ICD-9 CM=International Classification of Disease, 9th Edition, Clinical Modification. Px=Procedure.