Disclaimer

The FDA chose a specific outcome algorithm that met its need for a given medical product-outcome assessment. The use of a specific outcome algorithm in a Sentinel assessment should not be interpreted as an endorsement from FDA to use the algorithm for all safety assessments. Investigators should always consider the objective, study design, analytic approach, and data source of a given medical product safety assessment when choosing the outcome algorithm. The suitability of an outcome algorithm may change when applied to different scenarios. For additional information, please refer to the
Best Practices for Conducting and Reporting Pharmacoepidemiologic Safety Studies Using Electronic Healthcare Data guidance document provided by the FDA.

Overview

Title	Renal Cell Carcinoma Algorithm Defined in "Risk of Renal Cell Carcinoma Associated with Canagliflozin Versus Sitagliptin in Type 2 Diabetes: A Clone-Censor-Weight Cohort Study"
Request ID	cder_mpl2p_wp061
Description	This report lists International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) diagnosis codes, Current Procedural Terminology, Category II (CPT-2), Current Procedural Terminology, Category III (CPT-3), Current Procedural Terminology, Fourth Edition (CPT-4), Healthcare Common Procedure Coding System (HCPCS), International Classification of Diseases, Ninth Revision, Procedure Coding System (ICD-9-PCS), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) procedure codes, generic and brand names of medical products, and algorithms used to define renal cell carcinoma outcomes in this request. For additional information about the algorithm and how it was defined relative to the cohort and exposure(s) of interest in the analysis, refer to the analysis webpage here: https://www.sentinelinitiative.org/studies/drugs/individual-drug-analyses/risk-renal-cell-carcinoma-associated-canagliflozin-versus
Outcome	Renal cell carcinoma (RCC)
Algorithm to Define Outcome (please see continued on next page)	The primary outcome of interest, referred to as narrow RCC, was defined based on existing algorithms and using ICD-9-CM and ICD-10-CM diagnosis codes occurring in any care setting, CPT-2, CPT-3, CPT-4, HCPCS, ICD-9-PCS, and ICD-10-PCS procedure codes, and National Drug Codes (NDCs) to identify early- and late-stage RCC. Procedure codes for chemotherapy were also searched for in the procedure table. **Narrow RCC:** **Early-stage RCC[1]:** Individuals were classified as having early RCC when they met all of the following: (1) at least two non metastatic RCC ICD-9-CM or ICD-10-CM diagnosis codes (*Code List 1: "Early-Stage Renal Cell Carcinoma"*) within 60 days, with the event date assigned to the earliest diagnosis code date; (2) at least one CPT-4, HCPCS, ICD-9-PCS, or ICD-10-PCS procedure code indicating RCC related surgery or ablation[1,2] (*Code List 1: "Surgery/Ablation"*) occurring one to 120 days after the event date; and (3) at least one ICD-10-CM diagnosis or CPT-4 procedure code for diagnostic workup (e.g., imaging, bloodwork, pathology) (*Code List 1: "Diagnostic Workup"*) within 180 to one day before the event date.

Overview

Algorithm to Define Outcome (continued)	**Late-stage RCC[3]:** Individuals were classified as having late RCC when they had: (1) at least one broad RCC ICD-9-CM or ICD-10-CM diagnosis code (*Code List 1: "Renal Cell Carcinoma - Broad Definition"*) and at least one metastatic RCC diagnosis code (*Code List 1: "Late-Stage Renal Cell Carcinoma"*) within -30 to +60 days of the broad RCC code, with the event date assigned to the earliest RCC or metastatic RCC code date; (2) at least one ICD-10-CM diagnosis or CPT-4 procedure code for diagnostic workup (*Code List 1: "Diagnostic Workup"*) or at least one symptom-related ICD-9-CM or ICD-10-CM diagnosis code (*Code List 1: "Metastatic Renal Cell Carcinoma Symptoms"*) within -180 to +30 days of the event date; and (3) one of the following occurring one to 120 days after the event date: (a) at least one HCPCS, CPT, ICD-9-PCS, or ICD-10-PCS procedure code for systemic chemotherapy[4], radiation, or surgery[1,2] (*Code List 1: "Chemotherapy", "Surgery/Ablation", "Radiotherapy"*); (b) at least one NDC, CPT-4, or HCPCS code for RCC chemotherapy (*Code List 2; Code List 1: "Chemotherapy"*); or (c) evidence of mortality. **Broad RCC:** A secondary outcome of interest, broad RCC[5], was defined using at least two RCC ICD-9-CM or ICD-10-CM diagnosis codes for any stage (*Code List 1: "Renal Cell Carcinoma - Broad Definition"*) within 60 days, with the event date assigned to the earliest RCC diagnosis code date.
Query Period	March 1, 2013 - March 31, 2025
Request Send Date	November 6, 2025

[1]Chun, D.S. (2021). Methodological Approaches for Conducting Claims-Based Studies in Patients Diagnosed with Metastatic Renal Cell Carcinoma [Doctoral dissertation, University of North Carolina at Chapel Hill]. Carolina Digital Repository. https://doi.org/10.17615/m11c-yv05.

[2]Patel V, Lindquester WS, Dhangana R, Medsinge A. Percutaneous ablation of renal tumors versus surgical ablation and partial nephrectomy: Medicare trends and reimbursement cost comparison from 2010 to 2018. Abdom Radiol (NY). 2022 Feb;47(2):885-890. doi: 10.1007/s00261-021-03390-4.

[3]Miller DC, Saigal CS, Warren JL, Leventhal M, Deapen D, Banerjee M, Lai J, Hanley J, Litwin MS. External validation of a claims-based algorithm for classifying kidney-cancer surgeries. BMC Health Serv Res. 2009 Jun 6;9:92. doi: 10.1186/1472-6963-9-92.

[4]Motzer RJ, Jonasch E, Agarwal N, et al. NCCN Guidelines® Insights: Kidney Cancer, Version 2.2024: Systemic Therapy Options for Patients With Relapsed or Stage IV Disease. J Natl Compr Canc Netw. 2024 Feb;22(1):4-16. doi: 10.6004/jnccn.2024.0008.

[5]Setoguchi S, Solomon DH, Glynn RJ, Cook EF, Levin R, Schneeweiss S. Agreement of diagnosis and its date for hematologic malignancies and solid tumors between Medicare claims and cancer registry data. Cancer Causes Control. 2007 Jun;18(5):561-9. doi: 10.1007/s10552-007-0131-1.

Glossary

Care Setting - type of medical encounter or facility where the exposure, event, or condition code was recorded. Possible care settings include: Inpatient Hospital Stay (IP), Non-Acute Institutional Stay (IS), Emergency Department (ED), Ambulatory Visit (AV), and Other Ambulatory Visit (OA). For laboratory results, possible care settings include: Emergency department (E), Home (H), Inpatient (I), Outpatient (O), or Unknown or missing (U)

Outcome - outcome of interest (either primary or secondary)

Principal Diagnosis (PDX) - diagnosis or condition established to be chiefly responsible for admission of the patient to the hospital. 'P' = principal diagnosis, 'S' = secondary diagnosis, 'X' = unspecified diagnosis, '.' = blank. Along with the Care Setting values, forms the Caresetting/PDX parameter.

Query Period - period in which the modular program looks for exposures and outcomes of interest

Request Send Date - date the request was sent to Sentinel Data Partners

Code List 1. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), Current Procedural Terminology, Category II (CPT-2), Current Procedural Terminology, Category III (CPT-3), Current Procedural Terminology, Fourth Edition (CPT-4), Healthcare Common Procedure Coding System (HCPCS), International Classification of Diseases, Ninth Revision, Procedure Coding System (ICD-9-PCS), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) Codes Used to Define Renal Cell Carcinoma in this Request

Code	Description	Code Category	Code Type
	Renal Cell Carcinoma - Broad Definition		
189	Malignant neoplasm of kidney and other and unspecified urinary organs	Diagnosis	ICD-9-CM
189.0	Malignant neoplasm of kidney, except pelvis	Diagnosis	ICD-9-CM
198.0	Secondary malignant neoplasm of kidney	Diagnosis	ICD-9-CM
C64	Malignant neoplasm of kidney, except renal pelvis	Diagnosis	ICD-10-CM
C64.1	Malignant neoplasm of right kidney, except renal pelvis	Diagnosis	ICD-10-CM
C64.2	Malignant neoplasm of left kidney, except renal pelvis	Diagnosis	ICD-10-CM
C64.9	Malignant neoplasm of unspecified kidney, except renal pelvis	Diagnosis	ICD-10-CM
C79.0	Secondary malignant neoplasm of kidney and renal pelvis	Diagnosis	ICD-10-CM
C79.00	Secondary malignant neoplasm of unspecified kidney and renal pelvis	Diagnosis	ICD-10-CM
C79.01	Secondary malignant neoplasm of right kidney and renal pelvis	Diagnosis	ICD-10-CM
C79.02	Secondary malignant neoplasm of left kidney and renal pelvis	Diagnosis	ICD-10-CM
	Renal Cell Carcinoma - Narrow Definition		
	Early-Stage Renal Cell Carcinoma		
189	Malignant neoplasm of kidney and other and unspecified urinary organs	Diagnosis	ICD-9-CM
189.0	Malignant neoplasm of kidney, except pelvis	Diagnosis	ICD-9-CM
C64	Malignant neoplasm of kidney, except renal pelvis	Diagnosis	ICD-10-CM
C64.1	Malignant neoplasm of right kidney, except renal pelvis	Diagnosis	ICD-10-CM
C64.2	Malignant neoplasm of left kidney, except renal pelvis	Diagnosis	ICD-10-CM
C64.9	Malignant neoplasm of unspecified kidney, except renal pelvis	Diagnosis	ICD-10-CM
	Late-Stage Renal Cell Carcinoma		
196.0	Secondary and unspecified malignant neoplasm of lymph nodes of head, face, and neck	Diagnosis	ICD-9-CM
196.1	Secondary and unspecified malignant neoplasm of intrathoracic lymph nodes	Diagnosis	ICD-9-CM
196.2	Secondary and unspecified malignant neoplasm of intra-abdominal lymph nodes	Diagnosis	ICD-9-CM
196.3	Secondary and unspecified malignant neoplasm of lymph nodes of axilla and upper limb	Diagnosis	ICD-9-CM
196.5	Secondary and unspecified malignant neoplasm of lymph nodes of inguinal region and lower limb	Diagnosis	ICD-9-CM
196.6	Secondary and unspecified malignant neoplasm of intrapelvic lymph nodes	Diagnosis	ICD-9-CM
196.8	Secondary and unspecified malignant neoplasm of lymph nodes of multiple sites	Diagnosis	ICD-9-CM
196.9	Secondary and unspecified malignant neoplasm of lymph nodes, site unspecified	Diagnosis	ICD-9-CM
197.0	Secondary malignant neoplasm of lung	Diagnosis	ICD-9-CM
197.1	Secondary malignant neoplasm of mediastinum	Diagnosis	ICD-9-CM
197.2	Secondary malignant neoplasm of pleura	Diagnosis	ICD-9-CM
197.3	Secondary malignant neoplasm of other respiratory organs	Diagnosis	ICD-9-CM
197.4	Secondary malignant neoplasm of small intestine including duodenum	Diagnosis	ICD-9-CM

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Code	Description	Code Category	Code Type
197.5	Secondary malignant neoplasm of large intestine and rectum	Diagnosis	ICD-9-CM
197.6	Secondary malignant neoplasm of retroperitoneum and peritoneum	Diagnosis	ICD-9-CM
197.7	Secondary malignant neoplasm of liver	Diagnosis	ICD-9-CM
197.8	Secondary malignant neoplasm of other digestive organs and spleen	Diagnosis	ICD-9-CM
198.0	Secondary malignant neoplasm of kidney	Diagnosis	ICD-9-CM
198.1	Secondary malignant neoplasm of other urinary organs	Diagnosis	ICD-9-CM
198.2	Secondary malignant neoplasm of skin	Diagnosis	ICD-9-CM
198.3	Secondary malignant neoplasm of brain and spinal cord	Diagnosis	ICD-9-CM
198.4	Secondary malignant neoplasm of other parts of nervous system	Diagnosis	ICD-9-CM
198.5	Secondary malignant neoplasm of bone and bone marrow	Diagnosis	ICD-9-CM
198.6	Secondary malignant neoplasm of ovary	Diagnosis	ICD-9-CM
198.7	Secondary malignant neoplasm of adrenal gland	Diagnosis	ICD-9-CM
198.8	Secondary malignant neoplasm of other specified sites	Diagnosis	ICD-9-CM
198.81	Secondary malignant neoplasm of breast	Diagnosis	ICD-9-CM
198.82	Secondary malignant neoplasm of genital organs	Diagnosis	ICD-9-CM
198.89	Secondary malignant neoplasm of other specified sites	Diagnosis	ICD-9-CM
199.0	Disseminated malignant neoplasm	Diagnosis	ICD-9-CM
199.1	Other malignant neoplasm of unspecified site	Diagnosis	ICD-9-CM
C77.0	Secondary and unspecified malignant neoplasm of lymph nodes of head, face and neck	Diagnosis	ICD-9-CM
C77.1	Secondary and unspecified malignant neoplasm of intrathoracic lymph nodes	Diagnosis	ICD-10-CM
C77.2	Secondary and unspecified malignant neoplasm of intra-abdominal lymph nodes	Diagnosis	ICD-10-CM
C77.3	Secondary and unspecified malignant neoplasm of axilla and upper limb lymph nodes	Diagnosis	ICD-10-CM
C77.4	Secondary and unspecified malignant neoplasm of inguinal and lower limb lymph nodes	Diagnosis	ICD-10-CM
C77.5	Secondary and unspecified malignant neoplasm of intrapelvic lymph nodes	Diagnosis	ICD-10-CM
C77.8	Secondary and unspecified malignant neoplasm of lymph nodes of multiple regions	Diagnosis	ICD-10-CM
C77.9	Secondary and unspecified malignant neoplasm of lymph node, unspecified	Diagnosis	ICD-10-CM
C78.00	Secondary malignant neoplasm of unspecified lung	Diagnosis	ICD-10-CM
C78.01	Secondary malignant neoplasm of right lung	Diagnosis	ICD-10-CM
C78.02	Secondary malignant neoplasm of left lung	Diagnosis	ICD-10-CM
C78.1	Secondary malignant neoplasm of mediastinum	Diagnosis	ICD-10-CM
C78.2	Secondary malignant neoplasm of pleura	Diagnosis	ICD-10-CM
C78.30	Secondary malignant neoplasm of unspecified respiratory organ	Diagnosis	ICD-10-CM
C78.39	Secondary malignant neoplasm of other respiratory organs	Diagnosis	ICD-10-CM
C78.4	Secondary malignant neoplasm of small intestine	Diagnosis	ICD-10-CM
C78.5	Secondary malignant neoplasm of large intestine and rectum	Diagnosis	ICD-10-CM

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Code	Description	Code Category	Code Type
C78.6	Secondary malignant neoplasm of retroperitoneum and peritoneum	Diagnosis	ICD-10-CM
C78.7	Secondary malignant neoplasm of liver and intrahepatic bile duct	Diagnosis	ICD-10-CM
C78.80	Secondary malignant neoplasm of unspecified digestive organ	Diagnosis	ICD-10-CM
C78.89	Secondary malignant neoplasm of other digestive organs	Diagnosis	ICD-10-CM
C79.0	Secondary malignant neoplasm of kidney and renal pelvis	Diagnosis	ICD-10-CM
C79.00	Secondary malignant neoplasm of unspecified kidney and renal pelvis	Diagnosis	ICD-10-CM
C79.01	Secondary malignant neoplasm of right kidney and renal pelvis	Diagnosis	ICD-10-CM
C79.02	Secondary malignant neoplasm of left kidney and renal pelvis	Diagnosis	ICD-10-CM
C79.10	Secondary malignant neoplasm of unspecified urinary organs	Diagnosis	ICD-10-CM
C79.11	Secondary malignant neoplasm of bladder	Diagnosis	ICD-10-CM
C79.19	Secondary malignant neoplasm of other urinary organs	Diagnosis	ICD-10-CM
C79.2	Secondary malignant neoplasm of skin	Diagnosis	ICD-10-CM
C79.31	Secondary malignant neoplasm of brain	Diagnosis	ICD-10-CM
C79.32	Secondary malignant neoplasm of cerebral meninges	Diagnosis	ICD-10-CM
C79.40	Secondary malignant neoplasm of unspecified part of nervous system	Diagnosis	ICD-10-CM
C79.49	Secondary malignant neoplasm of other parts of nervous system	Diagnosis	ICD-10-CM
C79.51	Secondary malignant neoplasm of bone	Diagnosis	ICD-10-CM
C79.52	Secondary malignant neoplasm of bone marrow	Diagnosis	ICD-10-CM
C79.60	Secondary malignant neoplasm of unspecified ovary	Diagnosis	ICD-10-CM
C79.61	Secondary malignant neoplasm of right ovary	Diagnosis	ICD-10-CM
C79.62	Secondary malignant neoplasm of left ovary	Diagnosis	ICD-10-CM
C79.70	Secondary malignant neoplasm of unspecified adrenal gland	Diagnosis	ICD-10-CM
C79.71	Secondary malignant neoplasm of right adrenal gland	Diagnosis	ICD-10-CM
C79.72	Secondary malignant neoplasm of left adrenal gland	Diagnosis	ICD-10-CM
C79.81	Secondary malignant neoplasm of breast	Diagnosis	ICD-10-CM
C79.82	Secondary malignant neoplasm of genital organs	Diagnosis	ICD-10-CM
C79.89	Secondary malignant neoplasm of other specified sites	Diagnosis	ICD-10-CM
C79.9	Secondary malignant neoplasm of unspecified site	Diagnosis	ICD-10-CM
C80.0	Disseminated malignant neoplasm, unspecified	Diagnosis	ICD-10-CM
C80.1	Malignant (primary) neoplasm, unspecified	Diagnosis	ICD-10-CM
V10.52	Personal history of malignant neoplasm of kidney	Diagnosis	ICD-10-CM
Z85.528	Personal history of other malignant neoplasm of kidney	Diagnosis	ICD-10-CM
	Diagnostic Workup		
36251	Selective catheter placement (first-order), main renal artery and any accessory renal artery(s) for renal angiography, including arterial puncture and catheter placement(s), fluoroscopy, contrast injection(s), image postprocessing, permanent recording of images, and radiological supervision and interpretation, including pressure gradient measurements when performed, and flush aortogram when performed; unilateral	Procedure	CPT-4

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Code	Description	Code Category	Code Type
36252	Selective catheter placement (first-order), main renal artery and any accessory renal artery(s) for renal angiography, including arterial puncture and catheter placement(s), fluoroscopy, contrast injection(s), image postprocessing, permanent recording of images, and radiological supervision and interpretation, including pressure gradient measurements when performed, and flush aortogram when performed; bilateral	Procedure	CPT-4
36253	Superselective catheter placement (one or more second order or higher renal artery branches) renal artery and any accessory renal artery(s) for renal angiography, including arterial puncture, catheterization, fluoroscopy, contrast injection(s), image postprocessing, permanent recording of images, and radiological supervision and interpretation, including pressure gradient measurements when performed, and flush aortogram when performed; unilateral	Procedure	CPT-4
36254	Superselective catheter placement (one or more second order or higher renal artery branches) renal artery and any accessory renal artery(s) for renal angiography, including arterial puncture, catheterization, fluoroscopy, contrast injection(s), image postprocessing, permanent recording of images, and radiological supervision and interpretation, including pressure gradient measurements when performed, and flush aortogram when performed; bilateral	Procedure	CPT-4
52204	Cystourethroscopy, with biopsy(s)	Procedure	CPT-4
70553	Magnetic resonance (eg, proton) imaging, brain (including brain stem); without contrast material, followed by contrast material(s) and further sequences	Procedure	CPT-4
71045	Radiologic examination, chest; single view	Procedure	CPT-4
71046	Radiologic examination, chest; 2 views	Procedure	CPT-4
71047	Radiologic examination, chest; 3 views	Procedure	CPT-4
71048	Radiologic examination, chest; 4 or more views	Procedure	CPT-4
71250	Computed tomography, thorax, diagnostic; without contrast material	Procedure	CPT-4
71260	Computed tomography, thorax, diagnostic; with contrast material(s)	Procedure	CPT-4
71270	Computed tomography, thorax, diagnostic; without contrast material, followed by contrast material(s) and further sections	Procedure	CPT-4
71275	Computed tomographic angiography, chest (noncoronary), with contrast material(s), including noncontrast images, if performed, and image postprocessing	Procedure	CPT-4
71550	Magnetic resonance (eg, proton) imaging, chest (eg, for evaluation of hilar and mediastinal lymphadenopathy); without contrast material(s)	Procedure	CPT-4
71552	Magnetic resonance (eg, proton) imaging, chest (eg, for evaluation of hilar and mediastinal lymphadenopathy); without contrast material(s), followed by contrast material(s) and further sequences	Procedure	CPT-4

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Code	Description	Code Category	Code Type
71555	Magnetic resonance angiography, chest (excluding myocardium), with or without contrast material(s)	Procedure	CPT-4
72192	Computed tomography, pelvis; without contrast material	Procedure	CPT-4
72193	Computed tomography, pelvis; with contrast material(s)	Procedure	CPT-4
72194	Computed tomography, pelvis; without contrast material, followed by contrast material(s) and further sections	Procedure	CPT-4
72195	Magnetic resonance (eg, proton) imaging, pelvis; without contrast material(s)	Procedure	CPT-4
72197	Magnetic resonance (eg, proton) imaging, pelvis; without contrast material(s), followed by contrast material(s) and further sequences	Procedure	CPT-4
74150	Computed tomography, abdomen; without contrast material	Procedure	CPT-4
74160	Computed tomography, abdomen; with contrast material(s)	Procedure	CPT-4
74170	Computed tomography, abdomen; without contrast material, followed by contrast material(s) and further sections	Procedure	CPT-4
74176	Computed tomography, abdomen and pelvis; without contrast material	Procedure	CPT-4
74177	Computed tomography, abdomen and pelvis; with contrast material(s)	Procedure	CPT-4
74178	Computed tomography, abdomen and pelvis; without contrast material in one or both body regions, followed by contrast material(s) and further sections in one or both body regions	Procedure	CPT-4
74181	Magnetic resonance (eg, proton) imaging, abdomen; without contrast material(s)	Procedure	CPT-4
74183	Magnetic resonance (eg, proton) imaging, abdomen; without contrast material(s), followed by with contrast material(s) and further sequences	Procedure	CPT-4
78300	Bone and/or joint imaging; limited area	Procedure	CPT-4
78305	Bone and/or joint imaging; multiple areas	Procedure	CPT-4
78306	Bone and/or joint imaging; whole body	Procedure	CPT-4
78315	Bone and/or joint imaging; 3 phase study	Procedure	CPT-4
78320	Bone and/or joint imaging; tomographic (SPECT)	Procedure	CPT-4
81001	Urinalysis, by dip stick or tablet reagent for bilirubin, glucose, hemoglobin, ketones, leukocytes, nitrite, pH, protein, specific gravity, urobilinogen, any number of these constituents; automated, with microscopy	Procedure	CPT-4
81002	Urinalysis, by dip stick or tablet reagent for bilirubin, glucose, hemoglobin, ketones, leukocytes, nitrite, pH, protein, specific gravity, urobilinogen, any number of these constituents; non-automated, without microscopy	Procedure	CPT-4
81003	Urinalysis, by dip stick or tablet reagent for bilirubin, glucose, hemoglobin, ketones, leukocytes, nitrite, pH, protein, specific gravity, urobilinogen, any number of these constituents; automated, without microscopy	Procedure	CPT-4
85004	Blood count; automated differential WBC count	Procedure	CPT-4
85007	Blood count; blood smear, microscopic examination with manual differential WBC count	Procedure	CPT-4

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Code	Description	Code Category	Code Type
85008	Blood count; blood smear, microscopic examination without manual differential WBC count	Procedure	CPT-4
85009	Blood count; manual differential WBC count, buffy coat	Procedure	CPT-4
85013	Blood count; spun microhematocrit	Procedure	CPT-4
85014	Blood count; hematocrit (Hct)	Procedure	CPT-4
85018	Blood count; hemoglobin (Hgb)	Procedure	CPT-4
85032	Blood count; manual cell count (erythrocyte, leukocyte, or platelet) each	Procedure	CPT-4
85041	Blood count; red blood cell (RBC), automated	Procedure	CPT-4
85048	Blood count; leukocyte (WBC), automated	Procedure	CPT-4
85049	Blood count; platelet, automated	Procedure	CPT-4
88341	Immunohistochemistry or immunocytochemistry, per specimen; each additional single antibody stain procedure (List separately in addition to code for primary procedure)	Procedure	CPT-4
88342	Immunohistochemistry or immunocytochemistry, per specimen; initial single antibody stain procedure	Procedure	CPT-4
R93.41	Abnormal radiologic findings on diagnostic imaging of renal pelvis, ureter, or bladder	Diagnosis	ICD-10-CM
R93.421	Abnormal radiologic findings on diagnostic imaging of right kidney	Diagnosis	ICD-10-CM
R93.422	Abnormal radiologic findings on diagnostic imaging of left kidney	Diagnosis	ICD-10-CM
R93.429	Abnormal radiologic findings on diagnostic imaging of unspecified kidney	Diagnosis	ICD-10-CM
R93.49	Abnormal radiologic findings on diagnostic imaging of other urinary organs	Diagnosis	ICD-10-CM
76700	Ultrasound, abdominal, real time with image documentation; complete	Procedure	CPT-4
76705	Ultrasound, abdominal, real time with image documentation; limited (eg, single organ, quadrant, follow-up)	Procedure	CPT-4
	Metastatic Renal Cell Carcinoma Symptoms		
196.9	Secondary and unspecified malignant neoplasm of lymph nodes, site unspecified	Diagnosis	ICD-9-CM
197.0	Secondary malignant neoplasm of lung	Diagnosis	ICD-9-CM
197.7	Secondary malignant neoplasm of liver	Diagnosis	ICD-9-CM
198.3	Secondary malignant neoplasm of brain and spinal cord	Diagnosis	ICD-9-CM
198.5	Secondary malignant neoplasm of bone and bone marrow	Diagnosis	ICD-9-CM
198.7	Secondary malignant neoplasm of adrenal gland	Diagnosis	ICD-9-CM
275.42	Hypercalcemia	Diagnosis	ICD-9-CM
277.3	Amyloidosis	Diagnosis	ICD-9-CM
277.30	Amyloidosis, unspecified	Diagnosis	ICD-9-CM
277.39	Other amyloidosis	Diagnosis	ICD-9-CM
281.9	Unspecified deficiency anemia	Diagnosis	ICD-9-CM
285	Other and unspecified anemias	Diagnosis	ICD-9-CM
285.2	Anemia of chronic disease	Diagnosis	ICD-9-CM
285.21	Anemia in chronic kidney disease	Diagnosis	ICD-9-CM

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Code	Description	Code Category	Code Type
285.22	Anemia in neoplastic disease	Diagnosis	ICD-9-CM
285.29	Anemia of other chronic disease	Diagnosis	ICD-9-CM
285.8	Other specified anemias	Diagnosis	ICD-9-CM
285.9	Unspecified anemia	Diagnosis	ICD-9-CM
415.1	Pulmonary embolism and infarction	Diagnosis	ICD-9-CM
447.0	Arteriovenous fistula, acquired	Diagnosis	ICD-9-CM
453.2	Other venous embolism and thrombosis, of inferior vena cava	Diagnosis	ICD-9-CM
453.3	Embolism and thrombosis of renal vein	Diagnosis	ICD-9-CM
518.0	Pulmonary collapse	Diagnosis	ICD-9-CM
593.9	Unspecified disorder of kidney and ureter	Diagnosis	ICD-9-CM
599.7	Hematuria	Diagnosis	ICD-9-CM
599.70	Hematuria, unspecified	Diagnosis	ICD-9-CM
725	Polymyalgia rheumatica	Diagnosis	ICD-9-CM
733.9	Other and unspecified disorder of bone and cartilage	Diagnosis	ICD-9-CM
780.6	Fever and other physiologic disturbances of temperature regulation	Diagnosis	ICD-9-CM
780.60	Fever, unspecified	Diagnosis	ICD-9-CM
780.61	Fever presenting with conditions classified elsewhere	Diagnosis	ICD-9-CM
785.6	Enlargement of lymph nodes	Diagnosis	ICD-9-CM
786.3	Hemoptysis	Diagnosis	ICD-9-CM
786.30	Hemoptysis, unspecified	Diagnosis	ICD-9-CM
789.0	Abdominal pain	Diagnosis	ICD-9-CM
789.00	Abdominal pain, unspecified site	Diagnosis	ICD-9-CM
789.01	Abdominal pain, right upper quadrant	Diagnosis	ICD-9-CM
789.02	Abdominal pain, left upper quadrant	Diagnosis	ICD-9-CM
789.03	Abdominal pain, right lower quadrant	Diagnosis	ICD-9-CM
789.04	Abdominal pain, left lower quadrant	Diagnosis	ICD-9-CM
789.05	Abdominal pain, periumbilic	Diagnosis	ICD-9-CM
789.06	Abdominal pain, epigastric	Diagnosis	ICD-9-CM
789.07	Abdominal pain, generalized	Diagnosis	ICD-9-CM
789.09	Abdominal pain, other specified site	Diagnosis	ICD-9-CM
789.30	Abdominal or pelvic swelling, mass or lump, unspecified site	Diagnosis	ICD-9-CM
789.31	Abdominal or pelvic swelling, mass, or lump, right upper quadrant	Diagnosis	ICD-9-CM
789.32	Abdominal or pelvic swelling, mass, or lump, left upper quadrant	Diagnosis	ICD-9-CM
789.34	Abdominal or pelvic swelling, mass, or lump, left lower quadrant	Diagnosis	ICD-9-CM
789.37	Abdominal or pelvic swelling, mass, or lump, generalized	Diagnosis	ICD-9-CM
789.39	Abdominal or pelvic swelling, mass, or lump, other specified site	Diagnosis	ICD-9-CM
789.5	Ascites	Diagnosis	ICD-9-CM
789.51	Malignant ascites	Diagnosis	ICD-9-CM
789.59	Other ascites	Diagnosis	ICD-9-CM
799.4	Cachexia	Diagnosis	ICD-9-CM

Code List 1. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), Current Procedural Terminology, Category II (CPT-2), Current Procedural Terminology, Category III (CPT-3), Current Procedural Terminology, Fourth Edition (CPT-4), Healthcare Common Procedure Coding System (HCPCS), International Classification of Diseases, Ninth Revision, Procedure Coding System (ICD-9-PCS), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) Codes Used to Define Renal Cell Carcinoma in this Request

Code	Description	Code Category	Code Type
C77.9	Secondary and unspecified malignant neoplasm of lymph node, unspecified	Diagnosis	ICD-10-CM
C78.0	Secondary malignant neoplasm of lung	Diagnosis	ICD-10-CM
C78.00	Secondary malignant neoplasm of unspecified lung	Diagnosis	ICD-10-CM
C78.01	Secondary malignant neoplasm of right lung	Diagnosis	ICD-10-CM
C78.02	Secondary malignant neoplasm of left lung	Diagnosis	ICD-10-CM
C78.7	Secondary malignant neoplasm of liver and intrahepatic bile duct	Diagnosis	ICD-10-CM
C79.31	Secondary malignant neoplasm of brain	Diagnosis	ICD-10-CM
C79.51	Secondary malignant neoplasm of bone	Diagnosis	ICD-10-CM
C79.70	Secondary malignant neoplasm of unspecified adrenal gland	Diagnosis	ICD-10-CM
C79.71	Secondary malignant neoplasm of right adrenal gland	Diagnosis	ICD-10-CM
C79.72	Secondary malignant neoplasm of left adrenal gland	Diagnosis	ICD-10-CM
D63	Anemia in chronic diseases classified elsewhere	Diagnosis	ICD-10-CM
D63.0	Anemia in neoplastic disease	Diagnosis	ICD-10-CM
D63.1	Anemia in chronic kidney disease	Diagnosis	ICD-10-CM
D63.8	Anemia in other chronic diseases classified elsewhere	Diagnosis	ICD-10-CM
D64	Other anemias	Diagnosis	ICD-10-CM
D64.8	Other specified anemias	Diagnosis	ICD-10-CM
D64.9	Anemia, unspecified	Diagnosis	ICD-10-CM
D75.83	Thrombocytosis	Diagnosis	ICD-10-CM
D75.838	Other thrombocytosis	Diagnosis	ICD-10-CM
D75.839	Thrombocytosis, unspecified	Diagnosis	ICD-10-CM
E83.52	Hypercalcemia	Diagnosis	ICD-10-CM
E85	Amyloidosis	Diagnosis	ICD-10-CM
E85.8	Other amyloidosis	Diagnosis	ICD-10-CM
E85.89	Other amyloidosis	Diagnosis	ICD-10-CM
E85.9	Amyloidosis, unspecified	Diagnosis	ICD-10-CM
I77.0	Arteriovenous fistula, acquired	Diagnosis	ICD-10-CM
I82.220	Acute embolism and thrombosis of inferior vena cava	Diagnosis	ICD-10-CM
I82.221	Chronic embolism and thrombosis of inferior vena cava	Diagnosis	ICD-10-CM
I89.0	Lymphedema, not elsewhere classified	Diagnosis	ICD-10-CM
J81	Pulmonary edema	Diagnosis	ICD-10-CM
J81.0	Acute pulmonary edema	Diagnosis	ICD-10-CM
J81.1	Chronic pulmonary edema	Diagnosis	ICD-10-CM
J98.19	Other pulmonary collapse	Diagnosis	ICD-10-CM
M31.5	Giant cell arteritis with polymyalgia rheumatica	Diagnosis	ICD-10-CM
M35.3	Polymyalgia rheumatica	Diagnosis	ICD-10-CM
N28.9	Disorder of kidney and ureter, unspecified	Diagnosis	ICD-10-CM
N29	Other disorders of kidney and ureter in diseases classified elsewhere	Diagnosis	ICD-10-CM
R04.2	Hemoptysis	Diagnosis	ICD-10-CM
R10.0	Acute abdomen	Diagnosis	ICD-10-CM

Code List 1. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), Current Procedural Terminology, Category II (CPT-2), Current Procedural Terminology, Category III (CPT-3), Current Procedural Terminology, Fourth Edition (CPT-4), Healthcare Common Procedure Coding System (HCPCS), International Classification of Diseases, Ninth Revision, Procedure Coding System (ICD-9-PCS), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) Codes Used to Define Renal Cell Carcinoma in this Request

Code	Description	Code Category	Code Type
R10.10	Upper abdominal pain, unspecified	Diagnosis	ICD-10-CM
R10.11	Right upper quadrant pain	Diagnosis	ICD-10-CM
R10.12	Left upper quadrant pain	Diagnosis	ICD-10-CM
R10.13	Epigastric pain	Diagnosis	ICD-10-CM
R10.2	Pelvic and perineal pain	Diagnosis	ICD-10-CM
R10.30	Lower abdominal pain, unspecified	Diagnosis	ICD-10-CM
R10.31	Right lower quadrant pain	Diagnosis	ICD-10-CM
R10.32	Left lower quadrant pain	Diagnosis	ICD-10-CM
R10.33	Periumbilical pain	Diagnosis	ICD-10-CM
R10.84	Generalized abdominal pain	Diagnosis	ICD-10-CM
R10.9	Unspecified abdominal pain	Diagnosis	ICD-10-CM
R18	Ascites	Diagnosis	ICD-10-CM
R18.0	Malignant ascites	Diagnosis	ICD-10-CM
R18.8	Other ascites	Diagnosis	ICD-10-CM
R19.00	Intra-abdominal and pelvic swelling, mass and lump, unspecified site	Diagnosis	ICD-10-CM
R19.01	Right upper quadrant abdominal swelling, mass and lump	Diagnosis	ICD-10-CM
R19.02	Left upper quadrant abdominal swelling, mass and lump	Diagnosis	ICD-10-CM
R19.04	Left lower quadrant abdominal swelling, mass and lump	Diagnosis	ICD-10-CM
R19.07	Generalized intra-abdominal and pelvic swelling, mass and lump	Diagnosis	ICD-10-CM
R19.09	Other intra-abdominal and pelvic swelling, mass and lump	Diagnosis	ICD-10-CM
R31.9	Hematuria, unspecified	Diagnosis	ICD-10-CM
R50.81	Fever presenting with conditions classified elsewhere	Diagnosis	ICD-10-CM
R50.9	Fever, unspecified	Diagnosis	ICD-10-CM
R59.0	Localized enlarged lymph nodes	Diagnosis	ICD-10-CM
R59.1	Generalized enlarged lymph nodes	Diagnosis	ICD-10-CM
R59.9	Enlarged lymph nodes, unspecified	Diagnosis	ICD-10-CM
R60	Edema, not elsewhere classified	Diagnosis	ICD-10-CM
R60.0	Localized edema	Diagnosis	ICD-10-CM
R60.1	Generalized edema	Diagnosis	ICD-10-CM
R64	Cachexia	Diagnosis	ICD-10-CM
T78.3	Angioneurotic edema	Diagnosis	ICD-10-CM
T78.3XXA	Angioneurotic edema, initial encounter	Diagnosis	ICD-10-CM
T78.3XXD	Angioneurotic edema, subsequent encounter	Diagnosis	ICD-10-CM
T78.3XXS	Angioneurotic edema, sequela	Diagnosis	ICD-10-CM
	Surgery/Ablation		
554	Partial nephrectomy	Procedure	ICD-9-PCS
3807	Abdominal vein incision	Procedure	ICD-9-PCS
4711	Incidental laparoscopic appendectomy	Procedure	ICD-9-PCS
5123	Laparoscopic cholecystectomy	Procedure	ICD-9-PCS
5421	Laparoscopy	Procedure	ICD-9-PCS

Code List 1. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), Current Procedural Terminology, Category II (CPT-2), Current Procedural Terminology, Category III (CPT-3), Current Procedural Terminology, Fourth Edition (CPT-4), Healthcare Common Procedure Coding System (HCPCS), International Classification of Diseases, Ninth Revision, Procedure Coding System (ICD-9-PCS), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) Codes Used to Define Renal Cell Carcinoma in this Request

Code	Description	Code Category	Code Type
5451	Laparoscopic lysis of peritoneal adhesions	Procedure	ICD-9-PCS
5501	Nephrotomy	Procedure	ICD-9-PCS
5524	Open biopsy of kidney	Procedure	ICD-9-PCS
5531	Marsupialization of kidney lesion	Procedure	ICD-9-PCS
5539	Other local excision/destruction of renal lesion	Procedure	ICD-9-PCS
5551	Nephroureterectomy	Procedure	ICD-9-PCS
5552	Nephrectomy of remaining kidney	Procedure	ICD-9-PCS
5554	Bilateral nephrectomy	Procedure	ICD-9-PCS
5581	Suture laceration of kidney	Procedure	ICD-9-PCS
5589	Other repair of kidney	Procedure	ICD-9-PCS
5591	Decapsulation of the kidney	Procedure	ICD-9-PCS
5902	Other lysis perirenal/periureteral tissue	Procedure	ICD-9-PCS
5903	Laparoscopic lysis perirenal/periureteral adhesions	Procedure	ICD-9-PCS
5909	Other incision perirenal/periureteral tissue	Procedure	ICD-9-PCS
5921	Biopsy perirenal and perivesical tissues	Procedure	ICD-9-PCS
6563	Laparoscopic removal bilateral ovary-tubes	Procedure	ICD-9-PCS
37799	Unlisted procedure, vascular surgery (for vena caval resection with reconstruction)	Procedure	CPT-4
44200	Laparoscopic enterolysis	Procedure	CPT-4
47562	Laparoscopic cholecystectomy	Procedure	CPT-4
49010	Exploration, retroperitoneal area with or without biopsy	Procedure	CPT-4
49200	Excision or destruction, open, intra-abdominal or retroperitoneal tumors or cysts	Procedure	CPT-4
49201	Excision or destruction, open, intra-abdominal or retroperitoneal tumors or cysts, extensive	Procedure	CPT-4
49320	Laparoscopy, diagnostic	Procedure	CPT-4
49321	Laparoscopy diagnostic, with biopsy	Procedure	CPT-4
50205	Renal biopsy by surgical exposure of the kidney	Procedure	CPT-4
50220	Nephrectomy, including partial ureterectomy, any open approach	Procedure	CPT-4
50225	Nephrectomy, including partial ureterectomy, any open approach, complicated	Procedure	CPT-4
50230	Nephrectomy, radical, with regional lymphadenectomy and/or vena caval thrombectomy	Procedure	CPT-4
50234	Nephrectomy, with total ureterectomy and bladder cuff through same incision	Procedure	CPT-4
50236	Nephrectomy, with total ureterectomy and bladder cuff through separate incision	Procedure	CPT-4
50240	Nephrectomy, partial	Procedure	CPT-4
50250	Surgical cryoablation of renal tumor(s)	Procedure	CPT-4
50280	Excision or unroofing of cysts(s) of kidney	Procedure	CPT-4

Code List 1. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), Current Procedural Terminology, Category II (CPT-2), Current Procedural Terminology, Category III (CPT-3), Current Procedural Terminology, Fourth Edition (CPT-4), Healthcare Common Procedure Coding System (HCPCS), International Classification of Diseases, Ninth Revision, Procedure Coding System (ICD-9-PCS), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) Codes Used to Define Renal Cell Carcinoma in this Request

Code	Description	Code Category	Code Type
50380	Renal autotransplantation, reimplantation of kidney	Procedure	CPT-4
50541	Laparoscopy, surgical; ablation of renal cysts	Procedure	CPT-4
50542	Laparoscopy, surgical; ablation of renal mass lesion(s)	Procedure	CPT-4
50543	Laparoscopy, partial nephrectomy	Procedure	CPT-4
50545	Laparoscopy, radical nephrectomy	Procedure	CPT-4
50546	Laparoscopy, nephrectomy including partial ureterectomy	Procedure	CPT-4
50548	Laparoscopy, nephrectomy with total ureterectomy	Procedure	CPT-4
50549	Unlisted laparoscopy procedure, renal	Procedure	CPT-4
50592	Percutaneous radiofrequency ablation of renal tumor(s)	Procedure	CPT-4
50593	Percutaneous cryoablation of renal tumor(s)	Procedure	CPT-4
56300	Laparoscopy, diagnostic	Procedure	CPT-4
56340	Laparoscopic cholecystectomy	Procedure	CPT-4
56399	Unlisted procedure, laparoscopy	Procedure	CPT-4
60650	Laparoscopy with adrenalectomy	Procedure	CPT-4
0135T	Ablation, renal tumor(s), unilateral, percutaneous, cryotherapy	Procedure	CPT-3
0T500ZZ	Destruction of Right Kidney, Open Approach	Procedure	ICD-10-PCS
0T503ZZ	Destruction of Right Kidney, Percutaneous Approach	Procedure	ICD-10-PCS
0T504ZZ	Destruction of Right Kidney, Percutaneous Endoscopic Approach	Procedure	ICD-10-PCS
0T507ZZ	Destruction of Right Kidney, Via Natural or Artificial Opening	Procedure	ICD-10-PCS
0T508ZZ	Destruction of Right Kidney, Via Natural or Artificial Opening Endoscopic	Procedure	ICD-10-PCS
0T510ZZ	Destruction of Left Kidney, Open Approach	Procedure	ICD-10-PCS
0T513ZZ	Destruction of Left Kidney, Percutaneous Approach	Procedure	ICD-10-PCS
0T514ZZ	Destruction of Left Kidney, Percutaneous Endoscopic Approach	Procedure	ICD-10-PCS
0T517ZZ	Destruction of Left Kidney, Via Natural or Artificial Opening	Procedure	ICD-10-PCS
0T518ZZ	Destruction of Left Kidney, Via Natural or Artificial Opening Endoscopic	Procedure	ICD-10-PCS
0T530ZZ	Destruction of Right Kidney Pelvis, Open Approach	Procedure	ICD-10-PCS
0T533ZZ	Destruction of Right Kidney Pelvis, Percutaneous Approach	Procedure	ICD-10-PCS
0T534ZZ	Destruction of Right Kidney Pelvis, Percutaneous Endoscopic Approach	Procedure	ICD-10-PCS
0T537ZZ	Destruction of Right Kidney Pelvis, Via Natural or Artificial Opening	Procedure	ICD-10-PCS
0T538ZZ	Destruction of Right Kidney Pelvis, Via Natural or Artificial Opening Endoscopic	Procedure	ICD-10-PCS
0T540ZZ	Destruction of Left Kidney Pelvis, Open Approach	Procedure	ICD-10-PCS
0T543ZZ	Destruction of Left Kidney Pelvis, Percutaneous Approach	Procedure	ICD-10-PCS
0T544ZZ	Destruction of Left Kidney Pelvis, Percutaneous Endoscopic Approach	Procedure	ICD-10-PCS
0T547ZZ	Destruction of Left Kidney Pelvis, Via Natural or Artificial Opening	Procedure	ICD-10-PCS
0T548ZZ	Destruction of Left Kidney Pelvis, Via Natural or Artificial Opening Endoscopic	Procedure	ICD-10-PCS
0TB00ZZ	Excision of Right Kidney, Open Approach	Procedure	ICD-10-PCS
0TB03ZZ	Excision of Right Kidney, Percutaneous Approach	Procedure	ICD-10-PCS
0TB04ZZ	Excision of Right Kidney, Percutaneous Endoscopic Approach	Procedure	ICD-10-PCS
0TB07ZZ	Excision of Right Kidney, Via Natural or Artificial Opening	Procedure	ICD-10-PCS

Code List 1. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), Current Procedural Terminology, Category II (CPT-2), Current Procedural Terminology, Category III (CPT-3), Current Procedural Terminology, Fourth Edition (CPT-4), Healthcare Common Procedure Coding System (HCPCS), International Classification of Diseases, Ninth Revision, Procedure Coding System (ICD-9-PCS), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) Codes Used to Define Renal Cell Carcinoma in this Request

Code	Description	Code Category	Code Type
0TB08ZZ	Excision of Right Kidney, Via Natural or Artificial Opening Endoscopic	Procedure	ICD-10-PCS
0TB10ZZ	Excision of Left Kidney, Open Approach	Procedure	ICD-10-PCS
0TB13ZZ	Excision of Left Kidney, Percutaneous Approach	Procedure	ICD-10-PCS
0TB14ZZ	Excision of Left Kidney, Percutaneous Endoscopic Approach	Procedure	ICD-10-PCS
0TB17ZZ	Excision of Left Kidney, Via Natural or Artificial Opening	Procedure	ICD-10-PCS
0TB18ZZ	Excision of Left Kidney, Via Natural or Artificial Opening Endoscopic	Procedure	ICD-10-PCS
0TB30ZZ	Excision of Right Kidney Pelvis, Open Approach	Procedure	ICD-10-PCS
0TB33ZZ	Excision of Right Kidney Pelvis, Percutaneous Approach	Procedure	ICD-10-PCS
0TB34ZZ	Excision of Right Kidney Pelvis, Percutaneous Endoscopic Approach	Procedure	ICD-10-PCS
0TB37ZZ	Excision of Right Kidney Pelvis, Via Natural or Artificial Opening	Procedure	ICD-10-PCS
0TB38ZZ	Excision of Right Kidney Pelvis, Via Natural or Artificial Opening Endoscopic	Procedure	ICD-10-PCS
0TB40ZZ	Excision of Left Kidney Pelvis, Open Approach	Procedure	ICD-10-PCS
0TB43ZZ	Excision of Left Kidney Pelvis, Percutaneous Approach	Procedure	ICD-10-PCS
0TB44ZZ	Excision of Left Kidney Pelvis, Percutaneous Endoscopic Approach	Procedure	ICD-10-PCS
0TB47ZZ	Excision of Left Kidney Pelvis, Via Natural or Artificial Opening	Procedure	ICD-10-PCS
0TB48ZZ	Excision of Left Kidney Pelvis, Via Natural or Artificial Opening Endoscopic	Procedure	ICD-10-PCS
0TN00ZZ	Release Right Kidney, Open Approach	Procedure	ICD-10-PCS
0TN10ZZ	Release Left Kidney, Open Approach	Procedure	ICD-10-PCS
0TT00ZZ	Resection of Right Kidney, Open Approach	Procedure	ICD-10-PCS
0TT04ZZ	Resection of Right Kidney, Percutaneous Endoscopic Approach	Procedure	ICD-10-PCS
0TT10ZZ	Resection of Left Kidney, Open Approach	Procedure	ICD-10-PCS
0TT14ZZ	Resection of Left Kidney, Percutaneous Endoscopic Approach	Procedure	ICD-10-PCS
0TT20ZZ	Resection of Bilateral Kidneys, Open Approach	Procedure	ICD-10-PCS
0TT24ZZ	Resection of Bilateral Kidneys, Percutaneous Endoscopic Approach	Procedure	ICD-10-PCS
0TT30ZZ	Resection of Right Kidney Pelvis, Open Approach	Procedure	ICD-10-PCS
0TT34ZZ	Resection of Right Kidney Pelvis, Percutaneous Endoscopic Approach	Procedure	ICD-10-PCS
0TT37ZZ	Resection of Right Kidney Pelvis, Via Natural or Artificial Opening	Procedure	ICD-10-PCS
0TT38ZZ	Resection of Right Kidney Pelvis, Via Natural or Artificial Opening Endoscopic	Procedure	ICD-10-PCS
0TT40ZZ	Resection of Left Kidney Pelvis, Open Approach	Procedure	ICD-10-PCS
0TT44ZZ	Resection of Left Kidney Pelvis, Percutaneous Endoscopic Approach	Procedure	ICD-10-PCS
0TT47ZZ	Resection of Left Kidney Pelvis, Via Natural or Artificial Opening	Procedure	ICD-10-PCS
0TT48ZZ	Resection of Left Kidney Pelvis, Via Natural or Artificial Opening Endoscopic	Procedure	ICD-10-PCS
55.32	Open ablation of renal lesion or tissue	Procedure	ICD-9-PCS
55.33	Percutaneous ablation of renal lesion or tissue	Procedure	ICD-9-PCS
55.34	Laparoscopic ablation of renal lesion or tissue	Procedure	ICD-9-PCS
55.35	Other and unspecified ablation of renal lesion or tissue	Procedure	ICD-9-PCS
55.4	Partial nephrectomy	Procedure	ICD-9-PCS
55.5	Complete nephrectomy	Procedure	ICD-9-PCS
55.52	Nephrectomy of remaining kidney	Procedure	ICD-9-PCS
55.54	Bilateral nephrectomy	Procedure	ICD-9-PCS

Code List 1. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), Current Procedural Terminology, Category II (CPT-2), Current Procedural Terminology, Category III (CPT-3), Current Procedural Terminology, Fourth Edition (CPT-4), Healthcare Common Procedure Coding System (HCPCS), International Classification of Diseases, Ninth Revision, Procedure Coding System (ICD-9-PCS), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) Codes Used to Define Renal Cell Carcinoma in this Request

Code	Description	Code Category	Code Type
S2090	Ablation, open, one or more renal tumor(s); cryosurgical	Procedure	HCPCS
	Radiotherapy		
92.26	Teleradiotherapy of other particulate radiation	Procedure	ICD-9-PCS
D7060ZZ	Beam Radiation of Abdomen Lymphatics using Photons <1 MeV	Procedure	ICD-10-PCS
D7063Z0	Beam Radiation of Abdomen Lymphatics using Electrons, Intraoperative	Procedure	ICD-10-PCS
D7064ZZ	Beam Radiation of Abdomen Lymphatics using Heavy Particles (Protons,Ions)	Procedure	ICD-10-PCS
D7065ZZ	Beam Radiation of Abdomen Lymphatics using Neutrons	Procedure	ICD-10-PCS
D7066ZZ	Beam Radiation of Abdomen Lymphatics using Neutron Capture	Procedure	ICD-10-PCS
DW033Z0	Beam Radiation of Abdomen using Electrons, Intraoperative	Procedure	ICD-10-PCS
DW034ZZ	Beam Radiation of Abdomen using Heavy Particles (Protons,Ions)	Procedure	ICD-10-PCS
DWY37ZZ	Contact Radiation of Abdomen	Procedure	ICD-10-PCS
DW03	Beam Radiation / Abdomen	Procedure	ICD-10-PCS
D706	Beam Radiation / Lymphatics, Abdomen	Procedure	ICD-10-PCS
D7061ZZ	Beam Radiation of Abdomen Lymphatics using Photons 1 - 10 MeV	Procedure	ICD-10-PCS
D7062ZZ	Beam Radiation of Abdomen Lymphatics using Photons >10 MeV	Procedure	ICD-10-PCS
D7063ZZ	Beam Radiation of Abdomen Lymphatics using Electrons	Procedure	ICD-10-PCS
DW031ZZ	Beam Radiation of Abdomen using Photons 1 - 10 MeV	Procedure	ICD-10-PCS
DW033ZZ	Beam Radiation of Abdomen using Electrons	Procedure	ICD-10-PCS
DW036ZZ	Beam Radiation of Abdomen using Neutron Capture	Procedure	ICD-10-PCS
DW035ZZ	Beam Radiation of Abdomen using Neutrons	Procedure	ICD-10-PCS
DW030ZZ	Beam Radiation of Abdomen using Photons <1 MeV	Procedure	ICD-10-PCS
DW032ZZ	Beam Radiation of Abdomen using Photons >10 MeV	Procedure	ICD-10-PCS
DWY3	Other Radiation / Abdomen	Procedure	ICD-10-PCS
D7Y6	Other Radiation / Lymphatics, Abdomen	Procedure	ICD-10-PCS
DWY3FZZ	Plaque Radiation of Abdomen	Procedure	ICD-10-PCS
D7Y6FZZ	Plaque Radiation of Abdomen Lymphatics	Procedure	ICD-10-PCS
4165F	3-dimensional conformal radiotherapy (3D-CRT) or intensity modulated radiation therapy (IMRT) received (PRCA)	Procedure	CPT-2
0082T	Stereotactic body radiation therapy, treatment delivery, one or more treatment areas, per day	Procedure	CPT-3
0083T	Stereotactic body radiation therapy, treatment management, per day	Procedure	CPT-3
77373	Stereotactic body radiation therapy, treatment delivery, per fraction to 1 or more lesions, including image guidance, entire course not to exceed 5 fractions	Procedure	CPT-4
77401	Radiation treatment delivery, superficial and/or ortho voltage, per day	Procedure	CPT-4
77402	Radiation treatment delivery, => 1 MeV; simple	Procedure	CPT-4
77403	Radiation treatment delivery, single treatment area, single port or parallel opposed ports, simple blocks or no blocks; 6-10 MeV	Procedure	CPT-4
77404	Radiation treatment delivery, single treatment area, single port or parallel opposed ports, simple blocks or no blocks; 11-19 MeV	Procedure	CPT-4

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Code	Description	Code Category	Code Type
77406	Radiation treatment delivery, single treatment area, single port or parallel opposed ports, simple blocks or no blocks; 20 MeV or greater	Procedure	CPT-4
77407	Radiation treatment delivery, => 1 MeV; intermediate	Procedure	CPT-4
77408	Radiation treatment delivery, 2 separate treatment areas, 3 or more ports on a single treatment area, use of multiple blocks; 6-10 MeV	Procedure	CPT-4
77409	Radiation treatment delivery, 2 separate treatment areas, 3 or more ports on a single treatment area, use of multiple blocks; 11-19 MeV	Procedure	CPT-4
77411	Radiation treatment delivery, 2 separate treatment areas, 3 or more ports on a single treatment area, use of multiple blocks; 20 MeV or greater	Procedure	CPT-4
77412	Radiation treatment delivery, => 1 MeV; complex	Procedure	CPT-4
77413	Radiation treatment delivery, 3 or more separate treatment areas, custom blocking, tangential ports, wedges, rotational beam, compensators, electron beam; 6-10 MeV	Procedure	CPT-4
77414	Radiation treatment delivery, 3 or more separate treatment areas, custom blocking, tangential ports, wedges, rotational beam, compensators, electron beam; 11-19 MeV	Procedure	CPT-4
77416	Radiation treatment delivery, 3 or more separate treatment areas, custom blocking, tangential ports, wedges, rotational beam, compensators, electron beam; 20 MeV or greater	Procedure	CPT-4
77418	Intensity modulated treatment delivery, single or multiple fields/arcs, via narrow spatially and temporally modulated beams, binary, dynamic MLC, per treatment session	Procedure	CPT-4
77419	Weekly radiation therapy management; conformal	Procedure	CPT-4
77420	WK RAD THERAP MGMT; SIMPL	Procedure	CPT-4
77422	High energy neutron radiation treatment delivery; single treatment area using a single port or parallel-opposed ports with no blocks or simple blocking	Procedure	CPT-4
77423	High energy neutron radiation treatment delivery, 1 or more isocenter(s) with coplanar or non-coplanar geometry with blocking and/or wedge, and/or compensator(s)	Procedure	CPT-4
77427	Radiation treatment management, 5 treatments	Procedure	CPT-4
77431	Radiation therapy management with complete course of therapy consisting of 1 or 2 fractions only	Procedure	CPT-4
77470	Special treatment procedure (eg, total body irradiation, hemibody radiation, per oral or endocavitary irradiation)	Procedure	CPT-4
77776	Interstitial radiation source application; simple	Procedure	CPT-4
77777	Interstitial radiation source application; intermediate	Procedure	CPT-4
77778	Interstitial radiation source application, complex, includes supervision, handling, loading of radiation source, when performed	Procedure	CPT-4
77789	Surface application of low dose rate radionuclide source	Procedure	CPT-4

Code List 1. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), Current Procedural Terminology, Category II (CPT-2), Current Procedural Terminology, Category III (CPT-3), Current Procedural Terminology, Fourth Edition (CPT-4), Healthcare Common Procedure Coding System (HCPCS), International Classification of Diseases, Ninth Revision, Procedure Coding System (ICD-9-PCS), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) Codes Used to Define Renal Cell Carcinoma in this Request

Code	Description	Code Category	Code Type
DTY07ZZ	Contact Radiation of Kidney	Procedure	ICD-10-PCS
DT00	Beam Radiation / Kidney	Procedure	ICD-10-PCS
DT003Z0	Beam Radiation of Kidney using Electrons, Intraoperative	Procedure	ICD-10-PCS
DT004ZZ	Beam Radiation of Kidney using Heavy Particles (Protons,Ions)	Procedure	ICD-10-PCS
DT001ZZ	Beam Radiation of Kidney using Photons 1 - 10 MeV	Procedure	ICD-10-PCS
DT003ZZ	Beam Radiation of Kidney using Electrons	Procedure	ICD-10-PCS
DT006ZZ	Beam Radiation of Kidney using Neutron Capture	Procedure	ICD-10-PCS
DT005ZZ	Beam Radiation of Kidney using Neutrons	Procedure	ICD-10-PCS
DT000ZZ	Beam Radiation of Kidney using Photons <1 MeV	Procedure	ICD-10-PCS
DT002ZZ	Beam Radiation of Kidney using Photons >10 MeV	Procedure	ICD-10-PCS
DTY0CZZ	Intraoperative Radiation Therapy (IORT) of Kidney	Procedure	ICD-10-PCS
DTY0	Other Radiation / Kidney	Procedure	ICD-10-PCS
DTY0FZZ	Plaque Radiation of Kidney	Procedure	ICD-10-PCS
	Chemotherapy		
36489	Placement of central venous catheter (subclavian, jugular, or other vein) (eg, for central venous pressure, hyperalimentation, hemodialysis, or chemotherapy); percutaneous, over age 2	Procedure	CPT-4
36491	Placement of central venous catheter (subclavian, jugular, or other vein) (eg, for central venous pressure, hyperalimentation, hemodialysis, or chemotherapy); cutdown, over age 2	Procedure	CPT-4
96400	Chemotherapy administration, subcutaneous or intramuscular, with or without local anesthesia	Procedure	CPT-4
96401	Chemotherapy administration, subcutaneous or intramuscular; non-hormonal anti-neoplastic	Procedure	CPT-4
96402	Chemotherapy administration, subcutaneous or intramuscular; hormonal anti-neoplastic	Procedure	CPT-4
96405	Chemotherapy administration; intralesional, up to and including 7 lesions	Procedure	CPT-4
96406	Chemotherapy administration; intralesional, more than 7 lesions	Procedure	CPT-4
96408	Chemotherapy administration, intravenous; push technique	Procedure	CPT-4
96409	Chemotherapy administration; intravenous, push technique, single or initial substance/drug	Procedure	CPT-4
96410	Chemotherapy administration, intravenous; infusion technique, up to one hour	Procedure	CPT-4
96411	Chemotherapy administration; intravenous, push technique, each additional substance/drug (List separately in addition to code for primary procedure)	Procedure	CPT-4
96412	Chemotherapy administration, intravenous; infusion technique, one to 8 hours, each additional hour (List separately in addition to code for primary procedure)	Procedure	CPT-4
96413	Chemotherapy administration, intravenous infusion technique; up to 1 hour, single or initial substance/drug	Procedure	CPT-4

Code List 1. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), Current Procedural Terminology, Category II (CPT-2), Current Procedural Terminology, Category III (CPT-3), Current Procedural Terminology, Fourth Edition (CPT-4), Healthcare Common Procedure Coding System (HCPCS), International Classification of Diseases, Ninth Revision, Procedure Coding System (ICD-9-PCS), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) Codes Used to Define Renal Cell Carcinoma in this Request

Code	Description	Code Category	Code Type
96414	Chemotherapy administration, intravenous; infusion technique, initiation of prolonged infusion (more than 8 hours), requiring the use of a portable or implantable pump	Procedure	CPT-4
96415	Chemotherapy administration, intravenous infusion technique; each additional hour (List separately in addition to code for primary procedure)	Procedure	CPT-4
96416	Chemotherapy administration, intravenous infusion technique; initiation of prolonged chemotherapy infusion (more than 8 hours), requiring use of a portable or implantable pump	Procedure	CPT-4
96417	Chemotherapy administration, intravenous infusion technique; each additional sequential infusion (different substance/drug), up to 1 hour (List separately in addition to code for primary procedure)	Procedure	CPT-4
96420	Chemotherapy administration, intra-arterial; push technique	Procedure	CPT-4
96422	Chemotherapy administration, intra-arterial; infusion technique, up to 1 hour	Procedure	CPT-4
96423	Chemotherapy administration, intra-arterial; infusion technique, each additional hour (List separately in addition to code for primary procedure)	Procedure	CPT-4
96425	Chemotherapy administration, intra-arterial; infusion technique, initiation of prolonged infusion (more than 8 hours), requiring the use of a portable or implantable pump	Procedure	CPT-4
96440	Chemotherapy administration into pleural cavity, requiring and including thoracentesis	Procedure	CPT-4
96445	Chemotherapy administration into peritoneal cavity, requiring and including peritoneocentesis	Procedure	CPT-4
96542	Chemotherapy injection, subarachnoid or intraventricular via subcutaneous reservoir, single or multiple agents	Procedure	CPT-4
96545	Provision of chemotherapy agent	Procedure	CPT-4
96549	Unlisted chemotherapy procedure	Procedure	CPT-4
C8953	Chemotherapy administration, intravenous; push technique	Procedure	HCPCS
C8954	Chemotherapy administration, intravenous; infusion technique, up to one hour	Procedure	HCPCS
C8955	Chemotherapy administration, intravenous; infusion technique, each additional hour (List separately in addition to C8954)	Procedure	HCPCS
G0355	Chemotherapy administration, subcutaneous or intramuscular nonhormonal antineoplastic	Procedure	HCPCS
G0359	Chemotherapy administration, intravenous infusion technique; up to one hour, single or initial substance/drug	Procedure	HCPCS
G0360	Each additional hour, one to eight hours (list separately in addition to code for primary procedure) use G0360 in conjunction with G0359	Procedure	HCPCS
G0361	Initiation of prolonged chemotherapy infusion (more than eight hours), requiring use of a portable or implantable pump	Procedure	HCPCS

Code List 1. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), Current Procedural Terminology, Category II (CPT-2), Current Procedural Terminology, Category III (CPT-3), Current Procedural Terminology, Fourth Edition (CPT-4), Healthcare Common Procedure Coding System (HCPCS), International Classification of Diseases, Ninth Revision, Procedure Coding System (ICD-9-PCS), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) Codes Used to Define Renal Cell Carcinoma in this Request

Code	Description	Code Category	Code Type
G0362	Each additional sequential infusion (different substance/drug), up to one hour (use with G0359)	Procedure	HCPCS
G0363	Irrigation of implanted venous access device for drug delivery systems (do not report G0363 if an injection or infusion is provided on the same day)	Procedure	HCPCS
J8999	Prescription drug, oral, chemotherapeutic, NOS	Procedure	HCPCS
Q0083	Chemotherapy administration by other than infusion technique only (e.g., subcutaneous, intramuscular, push), per visit	Procedure	HCPCS
Q0084	Chemotherapy administration by infusion technique only, per visit	Procedure	HCPCS
Q0085	Chemotherapy administration by both infusion technique and other technique(s) (e.g. subcutaneous, intramuscular, push), per visit	Procedure	HCPCS
S9329	Home infusion therapy, chemotherapy infusion; administrative services, professional pharmacy services, care coordination, and all necessary supplies and equipment (drugs and nursing visits coded separately), per diem (do not use this code with S9330 or S9331)	Procedure	HCPCS
S9330	Home infusion therapy, continuous (24 hours or more) chemotherapy infusion; administrative services, professional pharmacy services, care coordination, and all necessary supplies and equipment (drugs and nursing visits coded separately), per diem	Procedure	HCPCS
S9331	Home infusion therapy, intermittent (less than 24 hours) chemotherapy infusion; administrative services, professional pharmacy services, care coordination, and all necessary supplies and equipment (drugs and nursing visits coded separately), per diem	Procedure	HCPCS
0519F	Planned chemotherapy regimen, including at a minimum: drug(s) prescribed, dose, and duration, documented prior to initiation of a new treatment regimen (ONC)	Procedure	CPT-2
3317F	Pathology report confirming malignancy documented in the medical record and reviewed prior to the initiation of chemotherapy (ONC)	Procedure	CPT-2
36260	Insertion of implantable intra-arterial infusion pump (eg, for chemotherapy of liver)	Procedure	CPT-4
36640	Arterial catheterization for prolonged infusion therapy (chemotherapy), cutdown	Procedure	CPT-4
36823	Insertion of arterial and venous cannula(s) for isolated extracorporeal circulation including regional chemotherapy perfusion to an extremity, with or without hyperthermia, with removal of cannula(s) and repair of arteriotomy and venotomy sites	Procedure	CPT-4
96446	Chemotherapy administration into the peritoneal cavity via implanted port or catheter	Procedure	CPT-4
96500	Chemotherapy Injection, Intravenous, Single Premixed Agent,	Procedure	CPT-4
96501	Chemotherapy Injection, Intravenous, Single Premixed Agent,	Procedure	CPT-4
96504	Chemotherapy Injection, Intravenous, Multiple Premixed Agents,	Procedure	CPT-4

Code List 1. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), Current Procedural Terminology, Category II (CPT-2), Current Procedural Terminology, Category III (CPT-3), Current Procedural Terminology, Fourth Edition (CPT-4), Healthcare Common Procedure Coding System (HCPCS), International Classification of Diseases, Ninth Revision, Procedure Coding System (ICD-9-PCS), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) Codes Used to Define Renal Cell Carcinoma in this Request

Code	Description	Code Category	Code Type
96505	Chemotherapy Injection, Intravenous, Multiple Premixed Agents,	Procedure	CPT-4
96508	Chemotherapy Injection, Intravenous, Complex, Using One Or	Procedure	CPT-4
96509	Chemotherapy Injection, Intravenous, Complex, Using One Or	Procedure	CPT-4
96510	Chemotherapy Injection, Intravenous, Complex, Using One Or	Procedure	CPT-4
96511	Chemotherapy Injection, Intravenous, Complex, Using One Or	Procedure	CPT-4
96512	Chemotherapy Injection, Intravenous, Complex, Using One Or	Procedure	CPT-4
96524	Chemotherapy Injection, Complex, Administered By Physician,	Procedure	CPT-4
96526	Chemotherapy Injection, Complex, Administered By Physician,	Procedure	CPT-4
96535	Chemotherapy Injection, Complex, Requiring Thoracentesis	Procedure	CPT-4
96540	Chemotherapy Injection, Intrathecal Via Reservoir, Single Or	Procedure	CPT-4
G0070	Professional services for the administration of intravenous chemotherapy or other intravenous highly complex drug or biological infusion for each infusion drug administration calendar day in the individual's home, each 15 min	Procedure	HCPCS
G0090	Professional services, initial visit, for the administration of intravenous chemotherapy or other highly complex infusion drug or biological for each infusion drug administration calendar day in the individual's home, each 15 min	Procedure	HCPCS
G0292	Administration(s) of experimental drug(s) only in a medicare qualifying clinical trial (includes administration for chemotherapy and other types of therapy via infusion and/or other than infusion), per day	Procedure	HCPCS
G0498	Chemotherapy administration, intravenous infusion technique; initiation of infusion in the office/clinic setting using office/clinic pump/supplies, with continuation of the infusion in the community setting (e.g., home, domiciliary, rest home or assisted living) using a portable pump provided by the office/clinic, includes follow up office/clinic visit at the conclusion of the infusion	Procedure	HCPCS
G8373	Chemotherapy plan documented prior to chemotherapy administration	Procedure	HCPCS
G8374	Chemotherapy plan not documented prior to chemotherapy administration	Procedure	HCPCS
G9021	Chemotherapy assessment for nausea and/or vomiting, patient reported, performed at the time of chemotherapy administration; assessment Level 1: not at all (for use in a Medicare-approved demonstration project)	Procedure	HCPCS
G9022	Chemotherapy assessment for nausea and/or vomiting, patient reported, performed at the time of chemotherapy administration; assessment Level 2: a little (for use in a Medicare-approved demonstration project)	Procedure	HCPCS
G9023	Chemotherapy assessment for nausea and/or vomiting, patient reported, performed at the time of chemotherapy administration; assessment Level 3: quite a bit (for use in a Medicare-approved demonstration project)	Procedure	HCPCS

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Code	Description	Code Category	Code Type
G9024	Chemotherapy assessment for nausea and/or vomiting, patient reported, performed at the time of chemotherapy administration; assessment Level 4: very much (for use in a Medicare-approved demonstration project)	Procedure	HCPCS
G9025	Chemotherapy assessment for pain, patient reported, performed at the time of chemotherapy administration; assessment Level 1: not at all (for use in a Medicare-approved demonstration project)	Procedure	HCPCS
G9026	Chemotherapy assessment for pain, patient reported, performed at the time of chemotherapy administration; assessment Level 2: a little (for use in a Medicare-approved demonstration project)	Procedure	HCPCS
G9027	Chemotherapy assessment for pain, patient reported, performed at the time of chemotherapy administration; assessment Level 3: quite a bit (for use in a Medicare-approved demonstration project)	Procedure	HCPCS
G9028	Chemotherapy assessment for pain, patient reported, performed at the time of chemotherapy administration; assessment Level 4: very much (for use in a Medicare-approved demonstration project)	Procedure	HCPCS
G9029	Chemotherapy assessment for lack of energy (fatigue), patient reported, performed at the time of chemotherapy administration; assessment Level 1: not at all (for use in a Medicare-approved demonstration project)	Procedure	HCPCS
G9030	Chemotherapy assessment for lack of energy (fatigue), patient reported, performed at the time of chemotherapy administration; assessment Level 2: a little (for use in a Medicare-approved demonstration project)	Procedure	HCPCS
G9031	Chemotherapy assessment for lack of energy (fatigue), patient reported, performed at the time of chemotherapy administration, assessment Level 3: quite a bit (for use in a Medicare approved demonstration project)	Procedure	HCPCS
G9032	Chemotherapy assessment for lack of energy (fatigue), patient reported, performed at the time of chemotherapy administration, assessment Level 4: very much (for use in a Medicare-approved demonstration project)	Procedure	HCPCS
G9826	Patient transferred to practice after initiation of chemotherapy	Procedure	HCPCS
G9833	Patient transfer to practice after initiation of chemotherapy	Procedure	HCPCS
J9999	Not otherwise classified, antineoplastic drugs	Procedure	HCPCS
M1156	Patient received active chemotherapy any time during the measurement period	Procedure	HCPCS
M1395	Patients receiving an initial chemotherapy regimen with a defined duration with the eligible clinician or group	Procedure	HCPCS
M1402	Patients receiving an initial chemotherapy regimen with a defined duration with the eligible clinician or group	Procedure	HCPCS
Q0155	Dronabinol (Syndros), 0.1 mg, oral, FDA-approved prescription anti-emetic, for use as a complete therapeutic substitute for an IV anti-emetic at the time of chemotherapy treatment, not to exceed a 48 hour dosage regimen	Procedure	HCPCS

Code List 1. List of International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), Current Procedural Terminology, Category II (CPT-2), Current Procedural Terminology, Category III (CPT-3), Current Procedural Terminology, Fourth Edition (CPT-4), Healthcare Common Procedure Coding System (HCPCS), International Classification of Diseases, Ninth Revision, Procedure Coding System (ICD-9-PCS), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) Codes Used to Define Renal Cell Carcinoma in this Request

Code	Description	Code Category	Code Type
Q0161	Chlorpromazine HCl, 5 mg, oral, FDA-approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at the time of chemotherapy treatment, not to exceed a 48-hour dosage regimen	Procedure	HCPCS
Q0162	Ondansetron 1 mg, oral, FDA-approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at the time of chemotherapy treatment, not to exceed a 48-hour dosage regimen	Procedure	HCPCS
Q0163	Diphenhydramine HCl, 50 mg, oral, FDA-approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at time of chemotherapy treatment not to exceed a 48-hour dosage regimen	Procedure	HCPCS
Q0164	Prochlorperazine maleate, 5 mg, oral, FDA-approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at the time of chemotherapy treatment, not to exceed a 48-hour dosage regimen	Procedure	HCPCS
Q0165	Prochlorperazine maleate, 10 mg, oral, FDA approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at the time of chemotherapy treatment, not to exceed a 48-hour dosage regimen	Procedure	HCPCS
Q0166	Granisetron HCl, 1 mg, oral, FDA-approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at the time of chemotherapy treatment, not to exceed a 24-hour dosage regimen	Procedure	HCPCS
Q0167	Dronabinol, 2.5 mg, oral, FDA-approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at the time of chemotherapy treatment, not to exceed a 48-hour dosage regimen	Procedure	HCPCS
Q0168	Dronabinol, 5 mg, oral, FDA approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at the time of chemotherapy treatment, not to exceed a 48-hour dosage regimen	Procedure	HCPCS
Q0169	Promethazine HCl, 12.5 mg, oral, FDA-approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at the time of chemotherapy treatment, not to exceed a 48-hour dosage regimen	Procedure	HCPCS
Q0170	Promethazine HCl, 25 mg, oral, FDA approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at the time of chemotherapy treatment, not to exceed a 48-hour dosage regimen	Procedure	HCPCS
Q0171	Chlorpromazine HCl, 10 mg, oral, FDA approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at the time of chemotherapy treatment, not to exceed a 48-hour dosage regimen	Procedure	HCPCS
Q0172	Chlorpromazine HCl, 25 mg, oral, FDA approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at the time of chemotherapy treatment, not to exceed a 48-hour dosage regimen	Procedure	HCPCS

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Code	Description	Code Category	Code Type
Q0173	Trimethobenzamide HCl, 250 mg, oral, FDA-approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at the time of chemotherapy treatment, not to exceed a 48-hour dosage regimen	Procedure	HCPCS
Q0174	Thiethylperazine maleate, 10 mg, oral, FDA-approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at the time of chemotherapy treatment, not to exceed a 48-hour dosage regimen	Procedure	HCPCS
Q0175	Perphenazine, 4 mg, oral, FDA-approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at the time of chemotherapy treatment, not to exceed a 48-hour dosage regimen	Procedure	HCPCS
Q0176	Perphenazine, 8 mg, oral, FDA approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at the time of chemotherapy treatment, not to exceed a 48 hour dosage regimen	Procedure	HCPCS
Q0177	Hydroxyzine pamoate, 25 mg, oral, FDA-approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at the time of chemotherapy treatment, not to exceed a 48-hour dosage regimen	Procedure	HCPCS
Q0178	Hydroxyzine pamoate, 50 mg, oral, FDA approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at the time of chemotherapy treatment, not to exceed a 48-hour dosage regimen	Procedure	HCPCS
Q0179	Ondansetron HCl 8 mg, oral, FDA approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at the time of chemotherapy treatment, not to exceed a 48-hour dosage regimen	Procedure	HCPCS
Q0180	Dolasetron mesylate, 100 mg, oral, FDA-approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at the time of chemotherapy treatment, not to exceed a 24-hour dosage regimen	Procedure	HCPCS
Q0181	Unspecified oral dosage form, FDA-approved prescription antiemetic, for use as a complete therapeutic substitute for an IV antiemetic at the time of chemotherapy treatment, not to exceed a 48-hour dosage regimen	Procedure	HCPCS
S5019	Chemotherapy administration supplies (with pump), per diem	Procedure	HCPCS
S5020	Chemotherapy administration supplies (without pump), per diem	Procedure	HCPCS
S9425	Nursing services and all necessary supplies and additives for home iv chemotherapy (via iv push, gravity drip, stationary pump, ambulatory belt pump), per diem (hydration solution and drugs not included)	Procedure	HCPCS
C9027	Injection, pembrolizumab, 1 mg	Procedure	HCPCS
J9271	Injection, pembrolizumab, 1 mg	Procedure	HCPCS
C9453	Injection, nivolumab, 1 mg	Procedure	HCPCS
J9298	Injection, nivolumab and relatlimab-rmbw, 3 mg/1 mg	Procedure	HCPCS
J9299	Injection, nivolumab, 1 mg	Procedure	HCPCS
J9228	Injection, ipilimumab, 1 mg	Procedure	HCPCS

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Code	Description	Code Category	Code Type
J9330	Injection, temsirolimus, 1 mg	Procedure	HCPCS
C9142	Injection, bevacizumab-maly, biosimilar, (Alymsys), 10 mg	Procedure	HCPCS
C9257	Injection, bevacizumab, 0.25 mg	Procedure	HCPCS
J9035	Injection, bevacizumab, 10 mg	Procedure	HCPCS
Q5107	Injection, bevacizumab-awwb, biosimilar, (Mvasi), 10 mg	Procedure	HCPCS
Q5118	Injection, bevacizumab-bvzr, biosimilar, (Zirabev), 10 mg	Procedure	HCPCS
Q5126	Injection, bevacizumab-maly, biosimilar, (Alymsys), 10 mg	Procedure	HCPCS
Q5129	Injection, bevacizumab-adcd (Vegzelma), biosimilar, 10 mg	Procedure	HCPCS
80169	Everolimus	Procedure	CPT-4
J7527	Everolimus, oral, 0.25 mg	Procedure	HCPCS
J8561	Everolimus, oral, 0.25 mg	Procedure	HCPCS
J9214	Injection, interferon, alfa-2b, recombinant, 1 million units	Procedure	HCPCS
S0148	Injection, PEGylated interferon alfa-2B, 10 mcg	Procedure	HCPCS

Note: *National Drug Codes (NDCs) are also searched for in the Procedure table as part of the outcome algorithms.*

Code List 2. List of Generic and Brand Names of Medical Products for Renal Cell Carcinoma Chemotherapies Used to Define Renal Cell Carcinoma in this Request

Generic Name	Brand Name
Renal Cell Carcinoma - Narrow Definition	
aldesleukin	Proleukin
avelumab	Bavencio
axitinib	Inlyta
bevacizumab	Avastin
bevacizumab-adcd	Vegzelma
bevacizumab-awwb	Mvasi
bevacizumab-bvzr	Zirabev
bevacizumab-maly	Alymsys
cabozantinib s-malate	Cabometyx
cabozantinib s-malate	Cometriq
everolimus	Afinitor
everolimus	Afinitor Disperz
everolimus	everolimus (antineoplastic)
everolimus	Torpenz
interferon alfa-2b,recomb.	Intron A
ipilimumab	Yervoy
lenvatinib mesylate	Lenvima
nivolumab	Opdivo
nivolumab-hyaluronidase-nvhy	Opdivo Qvantig
nivolumab-relatlimab-rmbw	Opdualag
pazopanib HCl	pazopanib
pazopanib HCl	Votrient
peginterferon alfa-2b	Sylatron
peginterferon alfa-2b	Sylatron 4-Pack
pembrolizumab	Keytruda
ropeginterferon alfa-2b-njft	Besremi
sorafenib tosylate	Nexavar
sorafenib tosylate	sorafenib
sunitinib malate	sunitinib malate
sunitinib malate	Sutent
temsirolimus	temsirolimus
temsirolimus	Torisel