

Agenda

- Overview
- Treatment
- MP/H Rules
- Quiz 1
- Collaborative Stage
- Quiz 2
- Case Scenarios

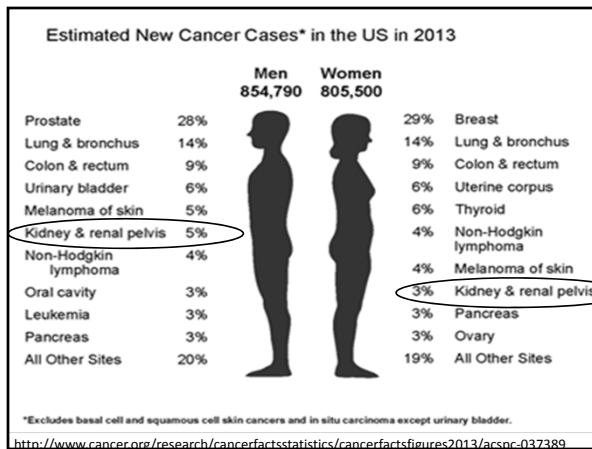
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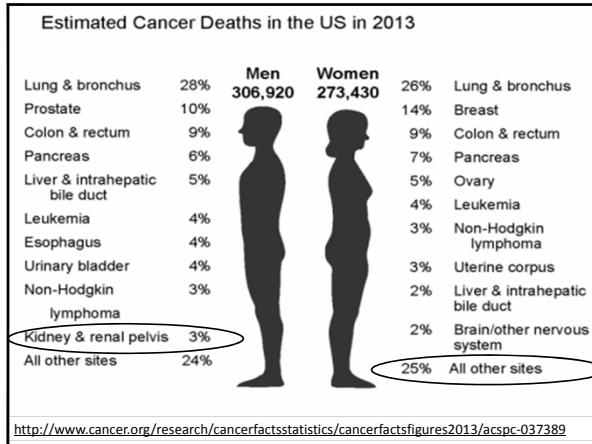
Key Statistics

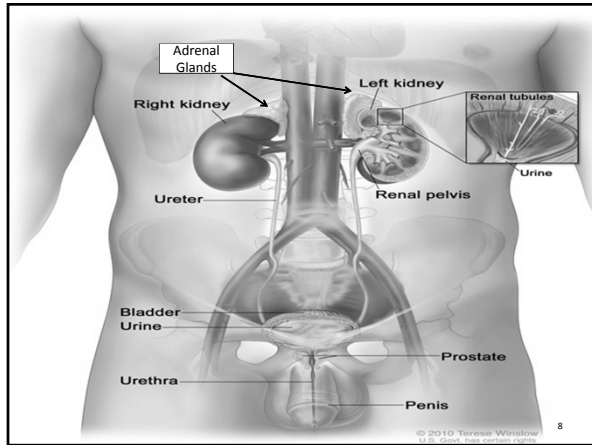
- Estimated new cases and deaths from renal cell (kidney and renal pelvis) cancer in the United States in 2013
 - New cases: 65,150.
 - Deaths: 13,680.

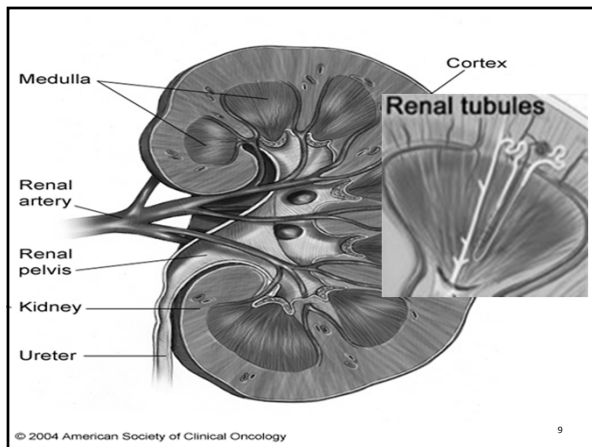
<http://www.cancer.gov/cancertopics/prdq>

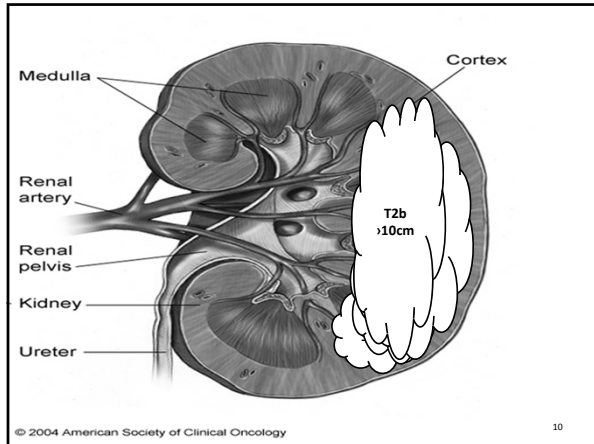
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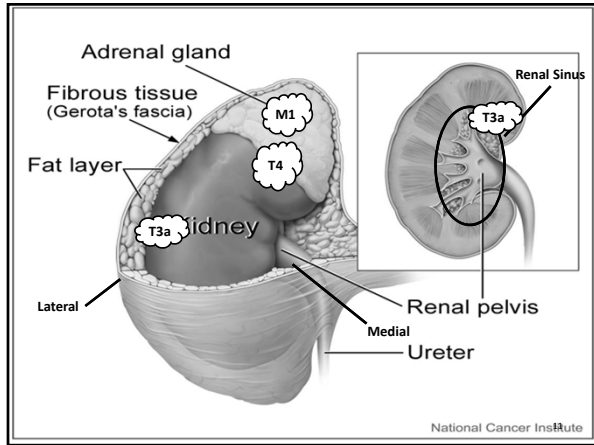


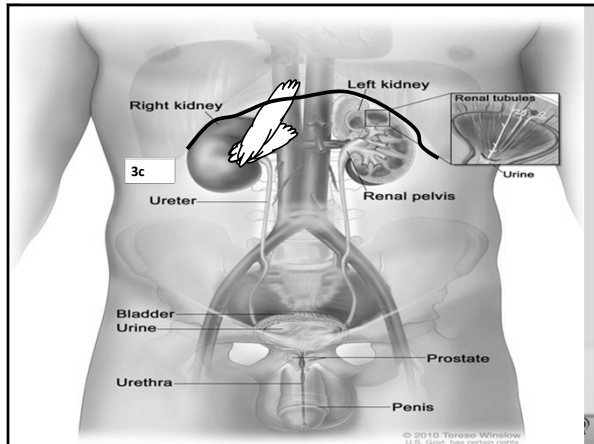


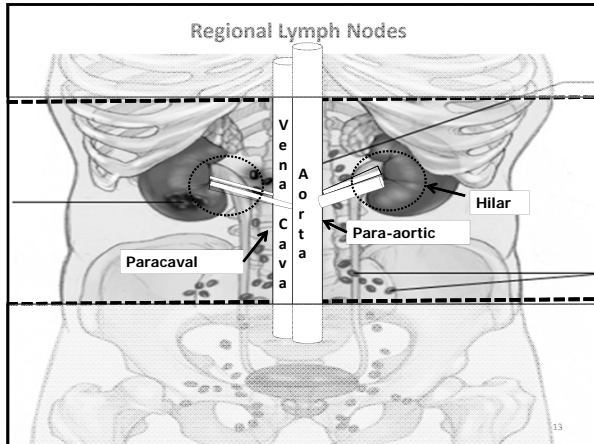


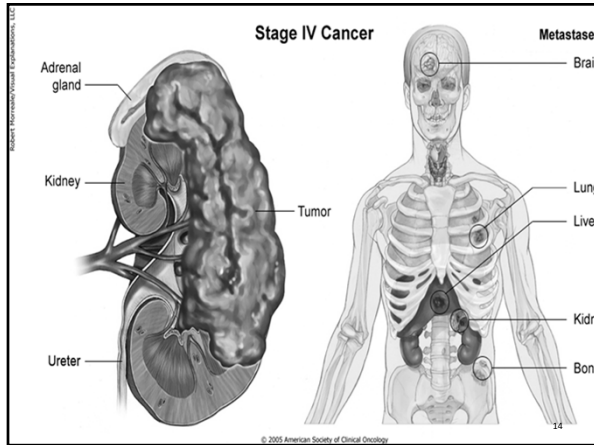












Histology

- Approximately 90% of renal tumors are renal cell carcinoma.
 - Approximately 85% of renal cell carcinomas are clear cell carcinoma
 - Other renal cell carcinomas include
 - Papillary
 - Chromophobe
 - Translocation
 - Bellini Duct or collecting duct tumors

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Fuhrman Grade

- Important prognostic factor
- Used for renal cell carcinoma of the kidney
 - May not correctly reflect papillary carcinoma
- Nuclear grade rather than a histologic grade
- Do not use Fuhrman grade to code Grade Path Value and Grade Path System

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Von Hippel-Lindau Disease (VHL)

- Rare, autosomal dominant genetic condition that predisposes individuals to benign and malignant tumors.
- The most common tumours found in VHL are:
 - Central nervous system and retinal hemangioblastomas
 - **Clear cell renal carcinomas**
 - Pheochromocytomas
 - pancreatic neuroendocrine tumours
 - pancreatic cysts

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Sarcomatoid

- Malignant sarcomatoid (spindle) cells may be present in any subtype of renal cell carcinoma.
 - Tend to present at a higher stage
 - Lower 5 and 10 year survival rates

Sarcomatoid differentiation in renal cell carcinoma: a study of 101 cases.
 de Peralta-Venturina M, Moch H, Amin M, Tamboli P, Hallemariam S, Mihatsch M, Javidan J, Stricker H, Ro JY, Amin MB.
 Source: Department of Pathology, Henry Ford Hospital, Detroit, Michigan, USA.
<http://www.ncbi.nlm.nih.gov/pubmed/11224597>

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Histologic Tumor Necrosis

- Necrosis in the tumor means that the cancer cells in that area are dead.
 - Necrosis in a tumor specimen is an indication that the malignancy is aggressive and has outgrown its blood supply.
 - The presence of tumor necrosis is an adverse prognostic indicator for renal cell carcinomas.

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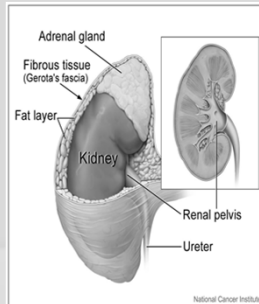
Renal Cell Carcinoma of the Kidney

TREATMENT

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Radical Nephrectomy (50)

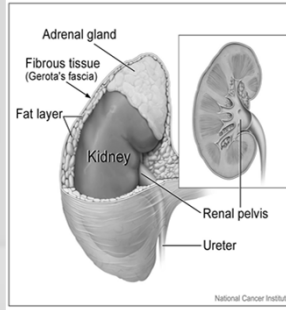
- Perifascial resection of the kidney, perirenal fat, regional lymph nodes, ipsilateral adrenal gland
- Approach
 - Open
 - Laparoscopic
 - Robotic



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Partial Nephrectomy (30)

- Nephron Sparing Nephrectomy
 - Removal of less than the entire kidney
 - Open or robotic



Lymph Node Dissection (LND)

- Is not thought to provide therapeutic benefit
 - No significant difference in overall survival among patients who had LND and those that only had radical nephrectomy
 - European Organization for the Research and Treatment of Cancer (EORTC) Phase III trial
- Does provide prognostic information
 - Virtually all patients with positive lymph nodes experience subsequent relapse



Approach-Surgical Procedure of the Primary Site at this Facility

- Description
 - This item is used to describe the surgical method used to approach the primary site for patients undergoing surgery of the primary site at this facility.
 - If the patient has multiple surgeries to the primary site, this item describes the approach used for the most invasive, definitive surgery.
- Rationale
 - This item is used to monitor patterns and trends in the adoption and utilization of minimally-invasive surgical techniques.



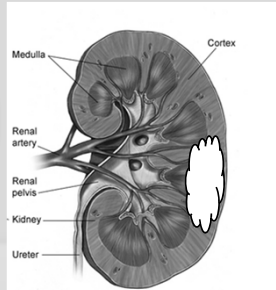
Approach-Surgical Procedure of the Primary Site at this Facility

- Codes
 - 0 No surgical procedure of primary site at this facility. Diagnosed at autopsy
 - 1 Robotic assisted
 - 2 Robotic converted to open
 - 3 Laparoscopic
 - 4 Laparoscopic converted to open
 - 5 Open. Approach not specified
 - 9 Patient record does not state whether a surgical procedure of the primary site was performed and no information is available. Death certificate only

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Stage I

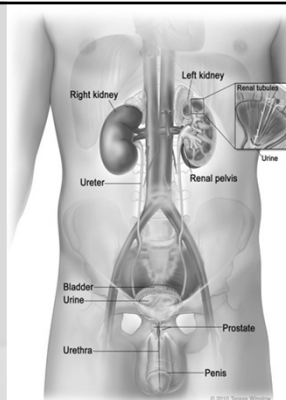
- Partial nephrectomy
 - Small unilateral tumors
 - When renal function is an issue
- Radical nephrectomy
- Active Surveillance



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Stage II-III

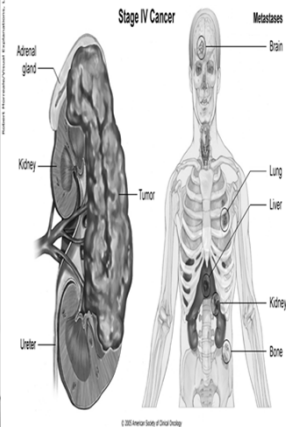
- Radical Nephrectomy
 - Patients with tumor thrombus may require cardiovascular surgeon
- Adjuvant therapy
 - Active surveillance



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Stage IV

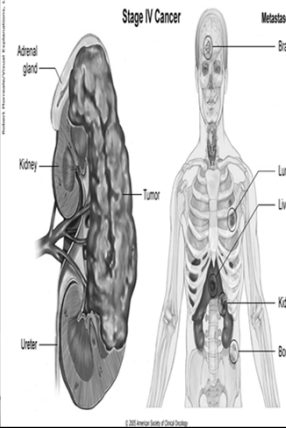
- Radical Nephrectomy
 - Metastasectomy for patient with solitary metastatic tumor
- Cytoreduction nephrectomy and/or mastectomy
- Systemic therapy



The diagram illustrates Stage IV Kidney Cancer. On the left, a kidney is shown with a large tumor. Labels include Adrenal gland, Kidney, Tumor, and Ureter. On the right, a human torso is shown with metastases in the Brain, Lung, Liver, Kidney, and Bone.

Stage IV


- Cytokine Therapy
 - IL-2 (interleukin-2)
 - IFN (interferon)
- Targeted Therapy
 - Sunitinib
 - Sorafenib
 - Pazopanib
 - Axitinib
 - Temsirolimus
 - Everolimus
 - bevacizumab



The diagram illustrates Stage IV Kidney Cancer. On the left, a kidney is shown with a large tumor. Labels include Adrenal gland, Kidney, Tumor, and Ureter. On the right, a human torso is shown with metastases in the Brain, Lung, Liver, Kidney, and Bone.


Kidney

MULTIPLE PRIMARY AND HISTOLOGY RULES




Unknown if Single or Multiple Tumor

- Rule M1
 - When it is not possible to determine if there is a single tumor or multiple tumors, opt for a single tumor and abstract as a single primary.*
 - *Note: Use this rule only after all information sources have been exhausted.*




Single Tumor

- Rule M2
 - A single tumor is always a single primary.
 - *Note: The tumor may overlap onto or extend into adjacent/contiguous site or subsite.*



Multiple Tumors

- Rule M3
 - Wilm's tumors are a single primary.
- Rule M4
 - Tumors in sites with ICD-O-3 topography codes that are different at the second (Cxx) and/or third characters (Cxxx) are multiple primaries.



Multiple Tumors

- Rule M5
 - Tumors in both the right kidney and in the left kidney are multiple primaries.
 - *Note: Abstract as a single primary when the tumors in one kidney are documented to be metastatic from the other kidney.*

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Multiple Tumors

- Rule M6
 - Tumors diagnosed more than three (3) years apart are multiple primaries.
- Rule M7
 - An invasive tumor following an in situ tumor more than 60 days after diagnosis are multiple primaries.
- Rule M8
 - One tumor with a specific renal cell type and another tumor with a different specific renal cell type are multiple primaries (Table 1).

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Multiple Tumors

- Rule M9 Abstract as a single primary when one tumor is:
 - Cancer/malignant neoplasm, NOS (8000) and another is a specific histology or
 - Carcinoma, NOS (8010) and the other is a specific carcinoma or
 - Adenocarcinoma, NOS (8140) and another is a specific adenocarcinoma or
 - Renal cell carcinoma, NOS (8312) and the other is a single renal cell type (Table 1)

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Multiple Tumors

- Rule M10
 - Tumors with ICD-O-3 histology codes that are different at the first (xxxx), second (xxxx) or third (xxxx) number are multiple primaries.
- Rule M11
 - Tumors that do not meet any of the above criteria are a single primary.






Histology




Single Tumor

- Rule H1
 - Code the histology documented by the physician when there is no pathology/cytology specimen or the pathology/cytology report is not available.
- Rule H2
 - Code the histology from the metastatic site when there is no pathology/cytology specimen from the primary site.
- Rule H3
 - Code the histology when only one histologic type is identified.




Single Tumor

- Rule H4
 - Code the invasive histologic type when there are invasive and in situ components.
- Rule H5
 - Code the specific type when the diagnosis is
 - Cancer/malignant neoplasm, NOS (8000) and a more specific histology or
 - Carcinoma, NOS (8010) and a more specific carcinoma or
 - Adenocarcinoma, NOS (8140) and one specific adenocarcinoma type or
 - Renal cell carcinoma, NOS (8312) and one specific renal cell type




Single Tumor

- Rule H6
 - Code 8255 (adenocarcinoma with mixed subtypes) when there are two or more specific renal cell carcinoma types.
- Rule H7
 - Code the histology with the numerically higher ICD-O-3 code.




Multiple Tumors

- Rule H8
 - Code the histology documented by the physician when there is no pathology/cytology specimen or the pathology/cytology report is not available.




Multiple Tumors

- Rule H9
 - Code the histology from the metastatic site when there is no pathology/cytology specimen from the primary site.
- Rule H10
 - Code the histology when only one histologic type is identified.
- Rule H11
 - Code the histology of the most invasive tumor.




Multiple Tumors

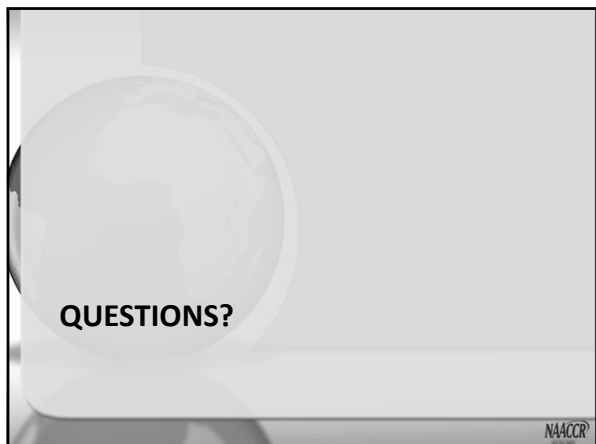
- Rule H12
 - Code the specific type when the diagnosis is
 - Cancer/malignant neoplasm, NOS (8000) and a more specific histology or
 - Carcinoma, NOS (8010) and a more specific carcinoma or
 - Adenocarcinoma, NOS (8140) and one specific adenocarcinoma type or
 - Renal cell carcinoma, NOS (8312) and one specific renal cell type

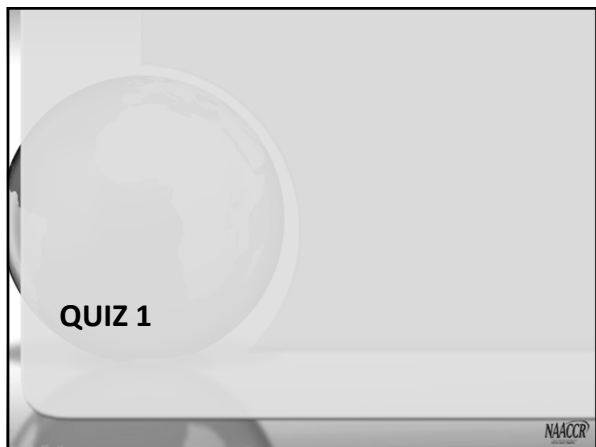


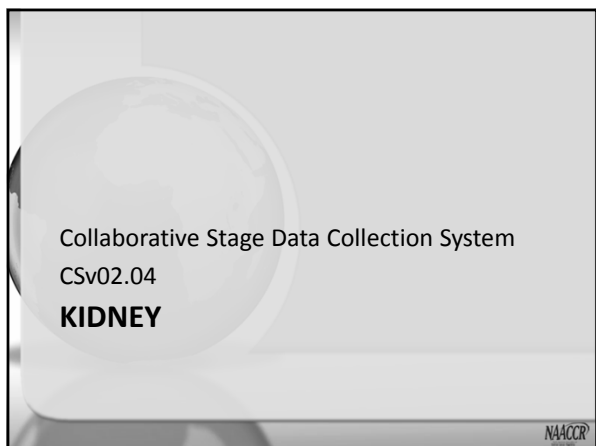
Multiple Tumors

- Rule H13
 - Code the histology with the numerically higher ICD-O-3 code.









CS Tumor Size: Kidney

- T1 and T2 categories based on tumor size
- Code 994
 - Described as "less than 4 cm," or "greater than 3 cm," or "between 3 cm and 4 cm"
 - Stated as T1a with no other information on tumor size
- Code 996
 - Described as "7 cm or less"
 - Stated as T1 [NOS] or T1b with no other information on tumor size

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CS Tumor Size: Kidney

- T1 and T2 categories based on tumor size
- Code 997
 - Described as "greater than 7 cm"
 - Stated as T2 [NOS] or T2a with no other information on tumor size
- Code 998
 - Described as "greater than 10 cm"
 - Stated as T2b with no other information on tumor size

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CS Extension: Kidney

- T1 and T2 categories for tumors limited to the kidney based on tumor size
 - For CS Extension codes 100-360, T category is based on value of CS Tumor Size
 - Code 100: Invasive cancer confined to kidney cortex and/or medulla
 - Kidney parenchyma: cortex, renal columns; medulla, medullary rays, renal pyramids, and renal papillae; nephrons; glomerulus and surrounding Bowman's capsule

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CS Extension: Kidney

- T1 and T2 categories for tumors limited to the kidney based on tumor size
 - Code 200: Invasion of renal capsule; renal pelvis or calyces involved; separate focus of tumor in renal pelvis/calyx
 - Code 300: Localized NOS
 - Codes 310-360: Stated as T1_ or T2_

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CS Extension: Kidney

- Codes 460-625
 - Extends into major veins or perinephric tissues but not into the ipsilateral adrenal gland and not beyond Gerota's fascia
- Codes 630-810
 - Invades beyond Gerota's fascia
- Direct extension of primary kidney tumor to contralateral kidney, contralateral ureter, liver from left kidney, or spleen from right kidney is coded in CS Mets at DX

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Pop Quiz

- Left nephrectomy pathology: Renal cell carcinoma, clear cell type, measuring 8.5cm (T2a), Furhman grade III, involves the renal vein and into the renal pelvis.

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Pop Quiz

- What is the code for CS Tumor Size?
 - 085
 - 997: Described as "greater than 7 cm"; Stated as T2 [NOS] or T2a with no other information on tumor size
- What is the code for CS Extension?
 - 200: Invasion of renal capsule; Renal pelvis or calyces involved; Separate focus of tumor in renal pelvis/calyx
 - 340: Stated as T2a with no other information on extension
 - 601: Renal vein NOS

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CS Lymph Nodes: Kidney

- Codes 100-110
 - Single regional node involved
- Codes 200-210
 - Multiple regional nodes involved
- Code 700
 - Regional node involvement, not stated if single or multiple nodes

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Pop Quiz

- Abdominal CT scan showed 10 cm tumor of left kidney with retroperitoneal lymphadenopathy that appeared to be malignant. Biopsy of renal mass showed renal cell carcinoma. Patient died before treatment could be started.
- What is the code for CS Lymph Nodes?
 - 100: Single retroperitoneal node
 - 200: Multiple retroperitoneal nodes
 - 700: Regional nodes, not stated if single or multiple
 - 999: Unknown

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CS Mets at DX: Kidney

- Code 20
 - Direct extension to contralateral kidney, contralateral ureter, liver from left kidney, spleen from right kidney
- Code 40
 - Noncontiguous metastasis to ipsilateral adrenal gland

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Pop Quiz

- Left nephrectomy pathology: Renal cell carcinoma involves the renal vein and into the renal pelvis with extension into the liver.
- What is the code for CS Extension?
 - 601: Renal vein NOS
 - 750: Liver; Spleen; Stomach
- What is the code for CS Mets at Dx?
 - 00: No distant metastasis
 - 20: Extension to liver from left kidney

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SSF1: Invasion Beyond Capsule

- Record specific location of invasion beyond renal capsule
 - Code 000: Invasion beyond capsule not present or not identified
 - Code 010: Lateral invasion
 - Into perinephric fat
 - Code 020: Medial invasion
 - Into renal sinus, perisinus fat
 - Code 030: Medial and lateral invasion
 - Code 991: Unspecified invasion beyond capsule
 - Code 998: No surgical resection of primary site

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Pop Quiz

- Left nephrectomy pathology: Renal cell carcinoma, clear cell type, measuring 8.5cm, Furhman grade III, involves the renal vein and into the renal pelvis.
- What is the code for SSF1?
 - 000: Invasion beyond capsule not present/not identified
 - 010: Lateral invasion: Perinephric fat
 - 020: Medial invasion: Renal sinus; Perisinus fat
 - 030: 010 + 020
 - 991: Invasion beyond capsule, NOS

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SSF2: Vein Involvement

- Record involvement of specific named veins
 - Code 000: Vein involvement not present or not identified
 - Code 010: Involvement of renal vein only
 - Codes 020-040: Involvement of inferior vena cava (IVC) only
 - Codes 050-090: Involvement of renal vein + IVC
 - Code 998: No surgical resection of primary site
- Do NOT record involvement of small unnamed veins (lymph vascular invasion)

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Pop Quiz

- Left nephrectomy pathology: Renal cell carcinoma, clear cell type, measuring 8.5cm, Furhman grade III, involves the renal pelvis. Lymphovascular invasion is present.
- What is the code for SSF2?
 - 000: Vein involvement not present/not identified
 - 010: Involvement of renal vein only
 - 040: Involvement of IVC, NOS only
 - 999: Unknown

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SSF3: Ipsilateral Adrenal Gland Involvement

- Record type of involvement of ipsilateral adrenal gland
 - Code 000: Ipsilateral adrenal gland involvement not present or not identified
 - Code 010: Contiguous ipsilateral adrenal gland involvement
 - Code 020: Noncontiguous ipsilateral adrenal gland involvement
 - Code 030: Contiguous + noncontiguous ipsilateral adrenal gland involvement
 - Code 040: Unspecified ipsilateral adrenal gland involvement
 - Code 998: No histologic examination to determine ipsilateral adrenal gland involvement

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SSF4: Sarcomatoid Features

- Record presence or absence of sarcomatoid features
 - Code 000: Sarcomatoid features not present or not identified
 - Code 010: Sarcomatoid features present or identified
 - Code 987: Not applicable - Not a renal cell carcinoma morphology
 - Code 998: No pathologic examination of primary site

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SSF5: Histologic Tumor Necrosis

- Record the presence or absence of tumor necrosis
 - Code 000: Tumor necrosis not present or not identified
 - Code 010: Tumor necrosis present or identified
 - Code 998: No pathologic examination of primary site

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Pop Quiz

- Abdominal CT scan: Small tumor confined to right kidney.
- Core biopsies right renal mass: Renal cell carcinoma, Fuhrman grade II.
- Cryoablation of right kidney mass.

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Pop Quiz

- What is the code for SSF3?
 - 000: Ipsilateral adrenal gland involvement not present/not identified
 - 998: No histologic examination to determine ipsilateral adrenal gland involvement
- What is the code for SSF4?
 - 000: Sarcomatoid features not present/not identified
 - 998: No pathologic examination of primary site
- What is the code for SSF5?
 - 000: Histologic tumor necrosis not present/not identified
 - 998: No histologic examination of primary site

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SSF6: Fuhrman Nuclear Grade

- Record the Fuhrman nuclear grade
 - Based on nuclear size and shape and the prominence of nucleoli in the tumor cells
 - Codes 010-040
 - Fuhrman nuclear grade 1-4
 - Code 987: Not applicable - Not a renal cell carcinoma morphology
 - Code 998: No histologic examination of primary site

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Pop Quiz

- Right nephrectomy path: 2 cm renal lesion with invasion of the renal capsule, sarcoma, grade 1 of 3.
- What is the code for SSF6?
 - 010: Grade 1
 - 987: Not applicable: Not a renal cell carcinoma morphology
 - 999: Unknown




SSF7: Size of Metastasis in Lymph Nodes

- Code exact size of largest metastasis in a regional node to the nearest mm
 - 001-979
- Code size of involved regional node if size of metastasis is not documented
- Use code 999 when regional nodes are involved but size is not stated; unknown if regional nodes involved; no information on size of lymph node metastasis or size of node



SSF8: Extranodal Extension (ENE) of Regional Lymph Nodes

- Code 010
 - No ENE documented in reports
 - Documented on reports that nodes are involved but no mention of ENE
 - Involved nodes are clinically mobile
- Code 020
 - ENE is present per path report or clinical statement
 - Involved nodes are clinically fixed or matted
- Code 030
 - Documentation of involved nodes but no mention of ENE and no reports to review



Pop Quiz

- Abdominal CT scan: 10 cm tumor of left kidney with malignant retroperitoneal lymphadenopathy, less than 2 cm.
- Biopsy of renal mass: Renal cell carcinoma.
- Patient died before treatment could be started.

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Pop Quiz

- What is the code for SSF7?
 - 000: No regional nodes involved
 - 020
 - 992: Described as "less than 2 cm" or "greater than 1 cm" or "between 1 cm and 2 cm"
 - 999: Unknown
- What is the code for SSF8?
 - 000: No regional nodes involved
 - 010: Extranodal extension not present
 - 030: Regional nodes involved, unknown if extranodal extension
 - 999: Unknown

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Standard Setters SSF Requirements for Kidney (parenchyma)

- SEER and CoC
 - SSF 1, 2, 3, 4, 6, 8
- NPCR
 - None
- Canadian Council of Cancer Registries
 - SSF 1-8 if information is in path report

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