"TUMORS OF THE KIDNEY & BLADDER"

Study Cases, Subscription A

February 2007

California Tumor Tissue Registry
c/o: Department of Pathology and Human Anatomy
Loma Linda University School of Medicine
11021 Campus Avenue, AH 335
Loma Linda, California 92350
(909) 558-4788
FAX: (909) 558-0188
E-mail: cctr@linkline.com
Target audience: Practicing pathologists and pathology residents.

Goal: To acquaint the participant with the histologic features of a variety of benign and malignant neoplasms and tumor-like conditions.

Objectives: The participant will be able to recognize morphologic features of a variety of benign and malignant neoplasms and tumor-like conditions and relate those processes to pertinent references in the medical literature.

Educational methods and media: Review of representative glass slides with associated histories. Feedback on consensus diagnoses from participating pathologists. Listing of selected references from the medical literature.

Principal faculty: Donald R. Chase, MD

CME Credit: Loma Linda University School of Medicine designates this continuing medical education activity for up to 2 hours of Category I of the Physician’s Recognition Award of the American Medical Association. CME credit is offered for the subscription year only.

Accreditation: Loma Linda University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor continuing medical education for physicians.
Contributor: Carol Solomon, M.D.  
San Diego, CA  

Case No. 1 - February 2007  

Tissue from: Urinary Bladder  

Accession #30272  

Clinical Abstract:  
A 57 year old man presented with a six month history of intermittent hematuria. Cystoscopy showed a large tumor within the bladder.

Gross Pathology:  
The 15.5 x 13.7 x 9.5 cm bladder was filled by an 8.0 x 4.3 x 3.7 cm fungating papillary tan-pink mass, circumferentially adherent to the lower two-thirds of the posterior and anterior bladder walls.

Contributor: Lorna Linda Pathology Group (np)  
Loma Linda, CA  

Case No. 2 - February 2007  

Tissue from: Urinary Bladder  

Accession #30203  

Clinical Abstract:  
This 83 year old man presented with gross painless hematuria. He had no elevation of his PSA. Cystoscopy showed a large tumor within the urinary bladder.

Gross Pathology:  
The specimen consisted of an 8 x 6 x 1.5 cm aggregate of transurethrally removed tumor chips.
Contributor: Lester Thompson, M.D.  
Woodland Hills, CA

Tissue from: Urinary Bladder  
Accession #30250

Clinical Abstract:
This 32 year old woman presented with vague lower abdominal pain, associated with a history of urinary tract infection. Antibiotics failed to resolve the symptoms and urinalysis showed microscopic hematuria. Colonoscopy was normal and intraoperative evaluation of ovaries, uterus and appendix showed no abnormalities.

Gross Pathology:
Not available.

Contributor: Mark Janssen, M.D.  
Anaheim, CA

Tissue from: Right kidney  
Accession #30147

Clinical Abstract:
After two months of worsening right flank pain, this 73 year old woman was found on CT scan to have a right renal mass. She had had no hematuria or weight loss.

Gross Pathology:
The kidney resection specimen was received in fragments. In addition to grossly apparent renal parenchyma, several of the pieces, ranging from 2.7 to 3.2 cm in greatest diameter, had firm tan-white cut surfaces. Other fragments were largely fatty and yellow.

Special Studies:
- Tumor cells positive: vimentin, smooth muscle actin, muscle specific actin, desmin, HMB45
- Tumor cells negative: pankeratin
Contributor: Jin Wang, M.D.
Hangzhou, People's Republic of China

Clinical Abstract:
A 35 year old woman presented with vague pain in the right lumbar region and a 20 day history of low grade fever. Work-up found a right kidney mass.

Gross Pathology:
The kidney resection specimen was 14 x 8 x 8 cm and contained a 9 x 7 cm well-defined mass in the lower pole. The cut surface was variable, ranging from gray, to pink-tan to dark red. There was extensive necrosis.

Special Studies:
Strongly positive: Desmin, SMA, vimentin
Focally positive: Actin
Negative: Cytokeratin, EMA, MyoD-1

Contributor: Anne Drejet, M.D.
Santa Barbara, CA

Clinical Abstract:
A 58 year old woman was found to have cystic masses involving the right kidney and adrenal gland.

Gross Pathology:
Not available.
**Clinical Abstract:**
Follow up of a 51 year old diabetic man in renal failure revealed a mass in his left kidney.

**Gross Pathology:**
In the mid portion of the 190 gram kidney was a 4.3 x 4.0 x 3.0 cm well-circumscribed hard pale tan mass.

**Special Studies:**
- Positive: CD99, CD34, Vimentin
- Negative: AE1/AE3, CD117, Desmin, actin

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**Contributor:** Anne Drejet, M.D.
Santa Barbara, CA

**Clinical Abstract:**
A 41 year old woman had a right kidney mass.

**Gross Pathology:**
The right kidney resection specimen with perinephric fat was 1210 grams. It was distorted by a 14 x 12 x 10 cm tumor which left a thin rim of kidney at one pole. The tumor penetrated the renal capsule, extending into surrounding fat. The cut surface was lobulated dense white parenchyma with focal yellow necrosis.

**Special Studies:**
- Positive: CD99, vimentin, SMA (focal), CD10
- Negative: CK-7, CK-20, CAM5.2, EMA, Ber-EP4, myo-D1, CD56, HMB-45, FLI-1, S-100, desmin, CD23, CD117, Estrogen & Progesterone receptors
Clinical Abstract:
A 69 year old woman had a left renal mass.

Gross Pathology:
The 244 gram resection specimen included a 2.5 x 2.3 x 1.5 cm fleshy dark red-brown mass in the upper pole of the kidney, filling one of the calyces. The mass was diffusely hemorrhagic, well encapsulated and confined to the kidney.

Clinical Abstract:
An 86 year old woman presented with hematuria. Imaging studies showed a right renal pelvic mass involving the collecting system extending into the mid portion of the kidney.

Gross Pathology:
The 284 gram kidney contained a 5 x 4 x 3.5 cm ill-defined infiltrating mass that extended nearly to the renal capsule.
TUMORS OF THE KIDNEY AND BLADDER
PATHOLOGY

Minutes – Subscription A
February, 2007

SUGGESTED READING (General Topics from Recent Literature):


California Tumor Tissue Registry
c/o: Department of Pathology and Human Anatomy
Loma Linda University School of Medicine
11021 Campus Avenue, AH 335
Loma Linda, California 92350
(909) 558-4788
FAX: (909) 558-0188
E-mail: ctttr@linkline.com
Web site & Case of the Month: www.cttr.org
Case 1:
Papillary urothelial carcinoma, bladder
T-71000, M-80503

Case 2:
Carcinosarcoma (sarcomatoid high grade urothelial carcinoma with chondrosarcoma and osteosarcoma, bladder
T-77100, M-92203

Case 3:
Mucinous adenocarcinoma, bladder
T-71000, M-81403

Case 4:
Angiomyolipoma, kidney
T-71000, M-88600

Case 5:
Leiomyosarcoma, kidney
T-71000, M-88903

Case 6:
Mixed epithelial and stromal tumor, kidney
T-71000, M-81003

Case 7:
Solitary fibrous tumor, kidney
T-71000, M-90510

Case 8:
High grade sarcoma, (NOS), kidney
T-71000, M-88103

Case 9:
Renal cell carcinoma with papillary and tubulocystic features, kidney
T-71000, M-83123

Case 10:
Collecting duct carcinoma, kidney
T-71000, M-83123
Case No. 1, Accession No. 30272

February 2007

Alameda (Alameda County Medical Center) - Papillary urothelial carcinoma, low grade
Fontana (Kaiser Permanente) - Transitional cell carcinoma, grade 2/3
Granada Hills - Invasive transitional cell carcinoma, no muscle involvement
Long Beach - Invasive papillary urothelial carcinoma, high grade
Long Beach (Long Beach Veterans Hospital) - Papillary urothelial carcinoma, WHO 2/3
Los Angeles - Transitional cell carcinoma
Monterey (Community Hospital of Monterey Peninsula) - Papillary urothelial carcinoma, high grade (2); Low grade (1)
Oakland - Low grade papillary carcinoma
Orange (Orange County Pathology Medical Group) - Papillary transitional cell carcinoma, low grade
Oxnard (St. John's Regional Medical Center) - Papillary transitional cell carcinoma, grade I/II, low grade papillary carcinoma (1); Papillary transitional cell carcinoma (2)
San Diego - Papillary transitional cell carcinoma, focally invasive, grade I, bladder
San Diego (Naval Medical Center San Diego) - Infiltrating urothelial carcinoma
San Diego (Scripps Health) - Low grade papillary urothelial carcinoma
San Diego (UCSD) - Papillary and sessile urothelial carcinoma, low grade
San Francisco (San Francisco General Hospital) - Low grade urothelial carcinoma
Santa Barbara - Low grade papillary urothelial carcinoma
Santa Rosa (Santa Rosa Memorial Hospital) - Transitional cell carcinoma (1); Papillary urothelial carcinoma, low grade (1)
Papillary transitional cell carcinoma, low grade (papillary urothelial tumor) (1)
Woodland Hills (Kaiser Permanente) - Non-invasive papillary urothelial carcinoma, low grade
Woodland Hills (Suda's Soldiers) - Urothelial carcinoma, grade 2, (non-invasive)
Arkansas (University of Arkansas for Medical Sciences) - Non-invasive papillary urothelial carcinoma, high grade, urinary bladder
Georgia, Decatur - Papillary urothelial carcinoma
Illinois, Burr Ridge - Papillary urothelial carcinoma (1); Urothelial carcinoma, grade I-II, non-invasive or microinvasive (1)
Illinois (Loyola University Medical Center) - Diffuse large B-cell lymphoma
Indiana (Howard Regional Medical Center) - Low grade papillary neoplasm
Maryland (Northwest Hospital Center) - High grade papillary urothelial carcinoma
Maryland (University of Maryland) - Infiltrating urothelial carcinoma, high grade
Massachusetts (Berkshire Medical Center) - Papillary carcinoma, non-invasive
Massachusetts (Beverly Hospital) - Non-invasive low grade papillary urothelial carcinoma
Michigan (Oakwood Hospital) - Papillary urothelial carcinoma, non-invasive
Minnesota (Fairview Ridges Hospital) - Papillary urothelial carcinoma, low-grade
Nebraska (Creighton University School of Medicine) - Low grade papillary urothelial carcinoma
New Mexico (University of New Mexico) - Papillary urothelial carcinoma
New York (Long Island Jewish Medical Center) - Invasive low grade papillary urothelial carcinoma
New York (Nassau University Medical Center) - Urothelial carcinoma, papillary
New York (Stony Brook University Hospital) - Transitional cell carcinoma, carcinoma in-situ
New York (SUNY Downstate Medical Center) - Papillary transitional cell carcinoma
North Carolina (Mountain Area Pathology) - High grade papillary transitional cell carcinoma (1); Transitional cell carcinoma, low grade (1)
Ohio (McCullough-Hyde Memorial Hospital) - Papillary urothelial carcinoma
Oklahoma, Tulsa - Papillary urothelial carcinoma, low grade
Pennsylvania (Drexel University College of Medicine) - Non-invasive papillary urothelial carcinoma, low grade
Pennsylvania (Lehigh Valley Hospital) - Papillary transitional cell carcinoma, grade II/III
Pennsylvania (Magee Women's Hospital) - Low grade papillary urothelial carcinoma, non-invasive
Pennsylvania (Mt. Nittany Medical Center) - Low grade papillary urothelial carcinoma
Pennsylvania (Pennsylvania Hospital Residents) - Low grade transitional carcinoma
Puerto Rico (University of Puerto Rico) - Invasive urothelial carcinoma, high grade
South Dakota (University of South Dakota Residents) - Papillary urothelial carcinoma, grade III
Tennessee, Kingsport - Low grade, superficially invasive papillary transitional cell carcinoma
Texas (Scott & White Memorial Hospital) - Low grade papillary urothelial carcinoma
Texas, Houston - Papillary transitional carcinoma, high grade
Texas, Lubbock - Low grade papillary urothelial carcinoma in-situ
Washington (Madigan Army Medical Center) - Papillary urothelial carcinoma, low grade (9); High grade (3)
West Virginia (Greenbrier Valley Medical Center) - Papillary non-infiltrative urothelial carcinoma
Australia (Royal Hobart Hospital) - Low grade papillary urothelial carcinoma with a partially inverted growth pattern
Australia (Royal Prince Alfred Hospital) - Non-invasive papillary urothelial carcinoma, low grade
Australia (Sullivan Nicolaides Pathology) - Papillary urothelial carcinoma, low grade
Brazil (Laboratorio Anatomia Patologica Ecitologia) - Papillary urothelial lesion of low grade potential

CTTR, February 2007 “Minutes” (Subscription A)
Case 1 - Diagnosis:

Papillary urothelial carcinoma, bladder
T-71000, M-80503

Case 1 - References:
Mostofi FK and Sesterhenn IA. Pathology of Epithelial Tumors and Carcinoma In-Situ of the Bladder. Prog Clin Biol Res; 1984; 162A:55-74.

Case No. 2, Accession No. 30203 February 2007

Alameda (Alameda County Medical Center) - Infiltrating urothelial carcinoma, sarcomatoid variant, with heterologous elements
Fontana (Kaiser Permanente) - Sarcoma vs. carcinosarcoma
Granada Hills - Carcinosarcoma vs. leiomyosarcoma
Long Beach - Carcinosarcoma with cartilagenous elements
Long Beach (Long Beach Veterans Hospital) - Carcinosarcoma
Los Angeles - Undifferentiated urothelial carcinoma
Monterey (Community Hospital of Monterey Peninsula) - Sarcomatoid urothelial carcinoma
Oakland - Carcinosarcoma
Orange (Orange County Pathology Medical Group) - Invasive high-grade urothelial/metaplastic carcinoma
Oxnard (St. John's Regional Medical Center) - High grade transitional cell carcinoma (2); Papillary transitional cell carcinoma (1)
San Diego - Urothelial carcinoma, sarcomatoid, bladder
San Diego (Naval Medical Center San Diego) - High grade sarcoma
San Diego (Scripps Health) - Carcinosarcoma
San Diego (UCSD) - Sarcomatoid carcinoma
San Francisco (San Francisco General Hospital) - Rhabdomyosarcoma
Santa Barbara - Poorly differentiated small cell carcinoma
Santa Rosa (Santa Rosa Memorial Hospital) - Carcinosarcoma (3)
Woodland Hills (Kaiser Permanente) - High grade urothelial carcinoma, sarcomatoid variant (with heterologous elements)
Woodland Hills (Suda's Soldiers) - Carcinosarcoma (chondrosarcoma)
Arkansas (University of Arkansas for Medical Sciences) - Urothelial carcinoma, sarcomatoid variant (heterologous), urinary bladder
Georgia, Decatur - Urothelial carcinoma with sarcomatoid change
Illinois, Burr Ridge - Urothelial carcinoma, high grade with sarcomatoid features (1); Infiltrating urothelial carcinoma, grade III (1)
Illinois (Loyola University Medical Center) - Medullary thyroid carcinoma
Indiana (Howard Regional Medical Center) - High grade papillary urothelial carcinoma
Maryland (Northwest Hospital Center) - Sarcomatoid urothelial carcinoma
Maryland (University of Maryland) - Sarcomatoid carcinoma with high grade urothelial carcinoma component
Massachusetts (Berkshire Medical Center) - Sarcomatoid and small cell carcinoma with heterologous elements (chondrosarcoma and osteosarcoma)
Massachusetts (Beverly Hospital) - Carcinosarcoma vs. pure sarcoma with sarcoma elements of chondrosarcoma
Michigan (Oakwood Hospital) - Sarcomatoid carcinoma, with background transitional cell in-situ
Minnesota (Fairview Ridges Hospital) - Urothelial carcinoma, high grade, with sarcomatoid differentiation
Nebraska (Creighton University School of Medicine) - Carcinosarcoma
New Mexico (University of New Mexico) - Sarcomatoid variant of urothelial carcinoma with heterologous elements
New York (Long Island Jewish Medical Center) - Sarcomatoid transitional cell carcinoma with heterologous elements
New York (Nassau County Medical Center) - Urothelial carcinoma, sarcomatoid
New York (Stony Brook University Hospital) - Transitional cell carcinoma (high grade)
New York (SUNY Downstate Medical Center) - Sarcomatoid carcinoma vs. sarcoma with rhabdoid differentiation
North Carolina (Mountain Area Pathology) - High grade transitional cell carcinoma and CIS (1); Sarcomatoid carcinoma (1)
Ohio (McCullough-Hyde Memorial Hospital) - Chondrosarcoma
Oklahoma, Tulsa - Urothelial carcinoma heterologous sarcomatoid type (carniosarcoma)
Pennsylvania (Drexel University College of Medicine) - Sarcomatoid (spindle cell) carcinoma of bladder with chondrosarcomatous differentiation (carniosarcoma)
Pennsylvania (Lehigh Valley Hospital) - Sarcomatoid carcinoma
Pennsylvania (Magee Women’s Hospital) - Sarcomatoid carcinoma
Pennsylvania (Mt. Nittany Medical Center) - Urothelial carcinoma, heterologous sarcomatoid type
Pennsylvania (Pennsylvania Hospital Residents) - Carcinosarcoma
Puerto Rico (University of Puerto Rico) - Sarcomatoid (metaplastic) carcinoma
South Dakota (University of South Dakota Residents) - Carcinosarcoma
Tennessee, Kingsport - Renal sarcomatoid carcinoma
Texas (Scott & White Memorial Hospital) - Carcinosarcoma
Texas, Houston - Spindle cell carcinoma, poorly differentiated
Texas, Lubbock - Metaplastic urothelial carcinoma
Washington (Madigan Army Medical Center) - Urothelial carcinoma with heterologous sarcomatous elements (12)
West Virginia (Greenbrier Valley Medical Center) - Infiltrative carcinomatoid urothelial carcinoma
Australia (Royal Hobart Hospital) - Sarcomatoid variant of urothelial carcinoma with heterologous differentiation (chondrosarcoma)
Australia (Royal Prince Alfred Hospital) - Urothelial carcinoma, sarcomatoid variant with heterologous elements
Australia (Sullivan Nicolaides Pathology) - Metaplastic carcinoma
Brazil (Laboratorio Anatomia Patologica Ecologia) - High grade sarcoma (osteosarcoma?)
Brazil, Sao Paulo - High grade urothelial carcinoma, sarcomatoid variant, with heterologous elements (chondrosarcoma)
Canada (Pascua Hospital) - Carcinosarcoma vs. sarcoma
Canada, Saskatoon - Papillary urothelial (transitional cell) carcinoma, high grade
Canada (Sherbrooke University Hospital) - Sarcomatoid carcinoma with heterologous elements
India, Karnataka - Carcinosarcoma
Ireland (Kerry General Hospital) - Transitional cell carcinoma of bladder
Jamaica (The University of West Indies) - Sarcomatoid renal cell carcinoma
Japan (Kyoto University Hospital) - Invasive urothelial carcinoma, sarcomatoid variant, with heterologous elements
Oman (Khoula Hospital) - Infiltrating urothelial carcinoma, sarcomatoid variant with heterologous element
Qatar (Hamad Medical Corporation) - Invasive transitional cell carcinoma, high grade with sarcomatoid areas
Saudi Arabia (King Fahad National Guard Hospital) - Sarcomatoid carcinoma of the urinary bladder with heterologous differentiation
Saudi Arabia (Maternity and Children’s Hospital) - Sarcomatoid (metaplastic) carcinoma
The Netherlands, Amsterdam - Sarcomatoid variant of an urothelial cell carcinoma
United Kingdom (Oxford Study Group) - Carcinosarcoma bladder

Case 2 - Diagnosis:
Carcinosarcoma (sarcomatoid high grade urothelial carcinoma with chondrosarcoma and osteosarcoma), bladder

T-77100, M-92203

CTTR, February 2007 “Minutes” (Subscription A)
Case 2 - References:

Case No. 3, Accession No. 30250

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<td>Granada Hills</td>
<td>Mucinous adenocarcinoma</td>
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<tr>
<td>Long Beach</td>
<td>Mucinous adenocarcinoma with signet rings</td>
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<tr>
<td>Long Beach (Long Beach Veterans Hospital)</td>
<td>Mucinous adenocarcinoma with signet ring cells</td>
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<tr>
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<td>Mucinous signet ring cell carcinoma</td>
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<td>Monterey (Community Hospital of Monterey Peninsula)</td>
<td>Mucinous (colloid) carcinoma</td>
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<tr>
<td>Oakland</td>
<td>Signet ring mucinous carcinoma</td>
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<td>Orange (Orange County Pathology Medical Group)</td>
<td>Adenocarcinoma</td>
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<td>Oxnard (St. John’s Regional Medical Center)</td>
<td>Mucinous adenocarcinoma (4)</td>
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<tr>
<td>San Diego</td>
<td>Adenocarcinoma, mucinous, bladder</td>
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<td>San Diego (Naval Medical Center San Diego)</td>
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<td>San Diego (UCSD)</td>
<td>Mucinous adenocarcinoma</td>
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<td>San Francisco (San Francisco General Hospital)</td>
<td>Mucinous carcinoid</td>
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<td>Santa Barbara</td>
<td>Mucinous adenocarcinoma</td>
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<td>Santa Rosa (Santa Rosa Memorial Hospital)</td>
<td>Mucin secreting adenocarcinoma (colloid carcinoma) (1); Mucinous/colloid adenocarcinoma (1); Colloid carcinoma (1)</td>
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<tr>
<td>Woodland Hills (Kaiser Permanente)</td>
<td>Mucinous adenocarcinoma</td>
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<tr>
<td>Woodland Hills (Suda’s Soldiers)</td>
<td>Mucinous adenocarcinoma (colloid carcinoma)</td>
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<tr>
<td>Arkansas (University of Arkansas for Medical Sciences)</td>
<td>Urachal carcinoma, mucinous type, urinary bladder</td>
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<td>Georgia, Decatur</td>
<td>Mucinous adenocarcinoma</td>
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<td>Illinois, Burr Ridge</td>
<td>Mucinous carcinoma, signet cell (1); Adenocarcinoma with signet ring features and prominent mucin accumulation, rule out GI origin (1)</td>
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<td>Illinois (Loyola University Medical Center)</td>
<td>Insular carcinoma</td>
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<tr>
<td>Indiana (Howard Regional Medical Center)</td>
<td>Mucinous adenocarcinoma (signet ring)</td>
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<td>Maryland (Northwest Hospital Center)</td>
<td>Mucinous adenocarcinoma</td>
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<td>Maryland (University of Maryland)</td>
<td>Mucinous adenocarcinoma</td>
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<tr>
<td>Massachusetts (Berkshire Medical Center)</td>
<td>Mucinous adenocarcinoma with signet ring features</td>
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<td>Massachusetts (Beverly Hospital)</td>
<td>Adenocarcinoma, mucinous variant</td>
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<td>Michigan (Oakwood Hospital)</td>
<td>Mucinous adenocarcinoma</td>
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<td>Minnesota (Fairview Ridges Hospital)</td>
<td>Mucinous adenocarcinoma, urachal</td>
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<td>Nebraska (Creighton University School of Medicine)</td>
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<td>New Mexico (University of New Mexico)</td>
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<td>New York (Long Island Jewish Medical Center)</td>
<td>Mucinous adenocarcinoma</td>
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<td>New York (Nassau University Medical Center)</td>
<td>Mucinous adenocarcinoma</td>
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<tr>
<td>New York (Stony Brook University Hospital)</td>
<td>Urachal carcinoma (mucinous adenocarcinoma)</td>
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Case No. 4, Accession No. 30147

Alameda (Alameda County Medical Center) - Angiomyolipoma

February 2007
Oman (Khoul Hospital) - Angiomyolipoma
Qatar (Hamad Medical Corporation) - Angiomyolipoma
Saudi Arabia (King Fahad National Guard Hospital) - Angiomyolipoma
Saudi Arabia (Maternity and Children's Hospital) - Angiomyolipoma
The Netherlands, Amstelveen - Angiomyolipoma of the kidney, nonuralchial type
United Kingdom (Oxford Study Group) - Angiomyolipoma

Case 4 - Diagnosis:
Angiomyolipoma, kidney
T-71000, M-88600

Case 4 - References:

Case No. 5, Accession No. 30115

Alameda (Alameda County Medical Center) - Leiomyosarcoma
Fontana (Kaiser Permanente) - Leiomyosarcoma
Granada Hills - Leiomyoma
Long Beach - Degenerating leiomyoma
Long Beach (Long Beach Veterans Hospital) - Leiomyoma with degenerative changes
Los Angeles - Leiomyosarcoma
Monterey (Community Hospital of Monterey Peninsula) - Leiomyoma (2); Leiomyosarcoma (1)
Oakland - Leiomyosarcoma sarcoma
Orange (Orange County Pathology Medical Group) - Leiomyosarcoma
Oxnard (St. John's Regional Medical Center) - Angiomyolipoma (4)
San Diego - Leiomyosarcoma, kidney rule out angiomyolipoma
San Diego (Naval Medical Center San Diego) - Leiomyosarcoma
San Diego (Scripps Health) - Leiomyosarcoma
San Diego (UCSD) - Smooth muscle tumor of uncertain malignant potential (STUMP)
San Francisco (San Francisco General Hospital) - Partially infacted cellular leiomyoma
Santa Barbara - Leiomyoma
Santa Rosa (Santa Rosa Memorial Hospital) - Leiomyosarcoma (3)
Woodland Hills (Kaiser Permanente) - Leiomyosarcoma
Woodland Hills (Suda's Soldiers) - Leiomyosarcoma
Arkansas (University of Arkansas for Medical Sciences) - Leiomyoma, kidney
Georgia, Decatur - Leiomyosarcoma
Illinois, Burr Ridge - Leiomyoma (1); Leiomyosarcoma (1)
Illinois (Loyola University Medical Center) - Well-differentiated neuroendocrine tumor
Indiana (Howard Regional Medical Center) - Leiomyosarcoma
Maryland (Northwest Hospital Center) - Leiomyosarcoma
Maryland (University of Maryland) - Leiomyosarcoma
Massachusetts (Berkshire Medical Center) - Leiomyosarcoma
Massachusetts (Beverly Hospital) - Leiomyosarcoma
Michigan (Oakwood Hospital) - Leiomyosarcoma
Minnesota (Fairview Ridges Hospital) - Leiomyosarcoma
Nebraska (Creighton University School of Medicine) - Leiomyosarcoma
New Mexico (University of New Mexico) - Leiomyosarcoma
New York (Long Island Jewish Medical Center) - Leiomyosarcoma
New York (Nassau University Medical Center) - Leiomyosarcoma
New York (Stony Brook University Hospital) - Inflammatory (pseudotumor) myofibroblastic tumors
New York (SUNY Downstate Medical Center) - Leiomyoma
North Carolina (Mountain Area Pathology) - Angiomyolipoma (1); Leiomyoma (1)
Ohio (McCullough-Hyde Memorial Hospital) - Angiomyolipoma
Oklahoma, Tulsa - Leiomyoma

February 2007
Leiomyoma

Leiomyosarcoma

Benign - nulceolar cyst
Mixed epithelial.
Leiomyosarcoma
Aduh polycystic disease
Cystic sarcomatoid

References:

Leiomyoma
Benign polycystic disease
Smooth
Cystic
Leiomyosarcoma

Case 5 - Diagnosis:
Leiomyosarcoma, kidney
T-71000, M-88903

Case 5 - References:

Case No. 6, Accession No. 30289

Alameda (Alameda County Medical Center) - Multilocular cyst (cystic nephroma)
Fontana (Kaiser Permanente) - Mixed epithelial, stromal tumor of kidney
Granada Hills - Cystic nephroma
Long Beach - Benign polycystic disease
Long Beach (Long Beach Veterans Hospital) - Polycystic disease, benign
Monterey (Community Hospital of Monterey Peninsula) - Cystic nephroma
Oakland - Multicystic nephroma
Orange (Orange County Pathology Medical Group) - Cystic nephroma
Oxnard (St. John’s Regional Medical Center) - Multicystic nephroma (4)
San Diego - Chronic pyelonephritis, spindle cell lesion leg, solitary fibrous tumor
San Diego (Naval Medical Center San Diego) - Cystic nephroma
San Diego (Scripps Health) - Benign multilocular cyst
San Diego (UCSD) - Cystic nephroma
San Francisco (San Francisco General Hospital) - Adult polycystic disease
Santa Barbara - Cystic nephroma

February 2007
Case 6 - Diagnosis:
Mixed epithelial and stromal tumor, kidney
T-71000, M-81003

Consultation: Stanford University, Richard Kempson, M.D., “Mixed Epithelial and Stromal Tumor of Kidney”.

Case 6 - References:

CTTR, February 2007 “Minutes” (Subscription A)
Case No. 7, Accession No. 30364

February 2007

Alameda (Alameda County Medical Center) - Solitary fibrous tumor
Fontana (Kaiser Permanente) - Solitary fibrous tumor
Granada Hills - Sclerosing hemangiofibroma
Long Beach - Solitary fibrous tumor
Long Beach (Long Beach Veterans Hospital) - Solitary fibrous tumor
Los Angeles - Sclerosing fibrous tumor, NOS
Monterey (Community Hospital of Monterey Peninsula) - Solitary fibrous tumor
Oakland - Solitary fibrous tumor
Orange (Orange County Pathology Medical Group) - Solitary fibrous tumor
Oxnard (St. John's Regional Medical Center) - Angiomyolipoma (4)
San Diego - Solitary fibrous tumor, kidney
San Diego (Naval Medical Center San Diego) - Solitary fibrous tumor
San Diego (Scripps Health) - Solitary fibrous tumor
San Diego (UCSD) - Solitary fibrous tumor
San Francisco (San Francisco General Hospital) - Endstage kidney with reactive fibrosis
Santa Barbara - Solitary fibrous tumor
Santa Rosa (Santa Rosa Memorial Hospital) - Solitary fibrous tumor (3)
Woodland Hills (Kaiser Permanente) - Solitary fibrous tumor
Woodland Hills (Suda's Soldiers) - Solitary fibrous tumor (amyloid in kidney)
Arkansas (University of Arkansas for Medical Sciences) - Solitary fibrous tumor
Georgia, Decatur - Solitary fibrous tumor
Illinois, Burr Ridge - Solitary fibrous tumor (2)
Illinois (Loyola University Medical Center) - Well-differentiated neuroendocrine tumor
Indiana (Howard Regional Medical Center) - Old infarct with pseudosarcomatous reaction
Maryland (Northwest Hospital Center) - Renomedullary interstitial cell tumor
Maryland (University of Maryland) - Solitary fibrous tumor
Massachusetts (Berkshire Medical Center) - Solitary fibrous tumor
Massachusetts (Beverly Hospital) - Solitary fibrous tumor
Michigan (Oakwood Hospital) - Solitary fibrous tumor
Minnesota (Fairview Ridges Hospital) - Solitary fibrous tumor
Nebraska (Creighton University School of Medicine) - Solitary fibrous tumor
New Mexico (University of New Mexico) - Solitary fibrous tumor
New York (Long Island Jewish Medical Center) - Solitary fibrous tumor
New York (Nassau University Medical Center) - Solitary fibrous tumor
New York (Stony Brook University Hospital) - Solitary fibrous tumor
New York (SUNY Downstate Medical Center) - Solitary fibrous tumor vs. desmoplastic nests spindle cell tumor
North Carolina (Mountain Area Pathology) - Solitary fibrous tumor (2)
Ohio (McCullough-Hyde Memorial Hospital) - Solitary fibrous tumor
Oklahoma, Tulsa - Renomedullary interstitial cell tumor
Pennsylvania (Drexel University College of Medicine) - Solitary fibrous tumor
Pennsylvania (Lehigh Valley Hospital) - Solitary fibrous tumor
Pennsylvania (Magee Women's Hospital) - Solitary fibrous tumor
Pennsylvania (Mt. Nittany Medical Center) - Solitary fibrous tumor
Pennsylvania (Pennsylvania Hospital Residents) - Solitary fibrous tumor
Puerto Rico (University of Puerto Rico) - Solitary fibrous tumor
South Dakota (University of South Dakota Residents) - Solitary fibrous tumor
Tennessee, Kingsport - Solitary fibrous tumor
Texas (Scott & White Memorial Hospital) - Solitary fibrous tumor
Texas, Houston - Inflammatory myofibroblastic pseudotumor
Texas, Lubbock - Solitary fibrous tumor
Washington (Madigan Army Medical Center) - Solitary fibrous tumor
West Virginia (Greenbrier Valley Medical Center) - Solitary fibrous tumor
Australia (Royal Hobart Hospital) - Solitary fibrous tumor
Australia (Royal Prince Alfred Hospital) - Solitary fibrous tumor
Australia (Sullivan Nicolaides Pathology) - Solitary fibrous tumor
Brazil (Laboratorio Anatomia Patologica Ectologia) - Solitary fibrous tumor of the kidney
Brazil, Sao Paulo - Solitary fibrous tumor
Canada (Pasqua Hospital) - Solitary fibrous tumor
Canada, Saskatchewan - Medullary fibroma (renomedullary interstitial cell tumor)
Canada (Sherbrooke University Hospital) - Solitary fibrous tumor
India, Karnataka - Solitary fibrous tumor
Ireland (Kerry General Hospital) - Solitary fibrous tumor
Jamaica (The University of West Indies) - Chronic pyelonephritis
Japan (Kyoto University Hospital) - Solitary fibrous tumor
Oman (Khoula Hospital) - Solitary fibrous tumor
Qatar (Hamad Medical Corporation) - Solitary fibrous tumor
Saudi Arabia (King Fahad National Guard Hospital) - Inflammatory pseudotumor
Saudi Arabia (Maternity and Children's Hospital) - Kaposi sarcoma
The Netherlands, Amstelveen - Solitary fibrous tumor
United Kingdom (Oxford Study Group) - Solitary fibrous tumor

Case 7 - Diagnosis:
Solitary fibrous tumor, kidney
T-71000, M-90510

Case 7 - References:

Case No. 8, Accession No. 30290

February 2007

Alameda (Alameda County Medical Center) - Primitive neuroectodermal tumor
Fontana (Kaiser Permanente) - Ewing sarcoma/PNET
Granada Hills - Sarcomatoid renal cell carcinoma
Long Beach - Adults Wilms' tumor
Long Beach (Long Beach Veterans Hospital) - Adult Wilms' tumor (2); Mesoblastic nephroma (1)
Los Angeles - Primitive neuroectodermal tumor
Monterey (Community Hospital of Monterey Peninsula) - Synovial sarcoma
Oakland - Primitive neuroectodermal tumor vs. rhabdomyosarcoma
Orange (Orange County Pathology Medical Group) - Synovial sarcoma
Oxnard (St. John's Regional Medical Center) - Leiomyosarcoma (4)
San Diego - Small blue cell tumor (metanephric stromal tumor vs. mesenchymal neoplasia)
San Diego (Naval Medical Center San Diego) - Small round blue cell tumor; Ewing's sarcoma (3); Wilms' tumor (1)
San Diego (Scripps Health) - Monophasic synovial sarcoma
San Diego (UCSD) - Primitive neuroectodermal tumor (PNET)
San Francisco (San Francisco General Hospital) - Adult Wilms' tumor
Santa Barbara - Leiomyosarcoma
Santa Rosa (Santa Rosa Memorial Hospital) - Ewing's sarcoma (PNET) (1); Primitive neuroectodermal tumor (2)
Woodland Hills (Kaiser Permanente) - Primitive neuroectodermal tumor/Ewing's sarcoma
Woodland Hills (Suda's Soldiers) - Primitive neuroectodermal tumor
Arkansas (University of Arkansas for Medical Sciences) - Synovial sarcoma, kidney
Georgia, Decatur - Suggestive of metastatic endometrial stromal sarcoma
Case 8 - Diagnosis:

High grade sarcoma (NOS), kidney
T-71000, M-88103

Directors Note: “Tumor has striking similarity to monophasic synovial sarcoma, but is keratin negative. Molecular studies were not done.” (drc)

Consultation: Stanford University, Anne E. Drejet, M.D., “High Grade Sarcoma, NOS”

Case 8 - References:
Case No. 9, Accession No. 30185

February 2007

Alameda (Alameda County Medical Center) - Renal cell carcinoma
Fontana (Kaiser Permanente) - Renal cell carcinoma, chromophobe type
Granada Hills - Oncocytoma
Long Beach - Oncocytoma
Long Beach (Long Beach Veterans Hospital) - Oncocytic neoplasm, favor oncocytoma
Los Angeles - Oncocytoma
Monterey (Community Hospital of Monterey Peninsula) - Papillary renal cell carcinoma
Oakland - Oncocytoma
Orange (Orange County Pathology Medical Group) - Oncocytoma
Oxnard (St. John's Regional Medical Center) - Renal cell carcinoma (4)
San Diego - Oncocytoma vs. renal cell carcinoma
San Diego (Naval Medical Center San Diego) - Papillary renal cell carcinoma
San Diego (Scripps Health) - Renal cell carcinoma, papillary type
San Diego (UCSD) - Papillary renal cell carcinoma, type 2
San Francisco (San Francisco General Hospital) - Eosinophilic chromophobe renal carcinoma
Santa Barbara - Oncocytoma
Santa Rosa (Santa Rosa Memorial Hospital) - Oncocytoma (3)
Woodland Hills (Kaiser Permanente) - Oncocytoma
Woodland Hills (Suda's Soldiers) - Oncocytoma
Arkansas (University of Arkansas for Medical Sciences) - Oncocytoma, kidney
Georgia, Decatur - Tubulocystic carcinoma
Illinois, Burr Ridge - Papillary carcinoma (2)
Illinois (Lovola University Medical Center) - Paraganglioma
Indiana (Howard Regional Medical Center) - Papillary renal carcinoma
Maryland (Northwest Hospital Center) - Papillary renal cell carcinoma
Maryland (University of Maryland) - Papillary renal cell carcinoma, oncocytic variant
Massachusetts (Beverly Hospital) - Renal oncocytoma
Michigan (Oakwood Hospital) - Renal cell carcinoma, clear cell type
Minnesota (Fairview Ridges Hospital) - Renal cell carcinoma, papillary
Nebraska (Creighton University School of Medicine) - Renal cell carcinoma, oncocytic type
New Mexico (University of New Mexico) - Renal cell carcinoma, clear cell or classical type
New York (Long Island Jewish Medical Center) - Chromophobe renal cell carcinoma, eosinophilic variant
New York (Nassau University Medical Center) - Renal cell carcinoma
New York (Stony Brook University Hospital) - Oncocytoma
New York (SUNY Downstate Medical Center) - Papillary renal carcinoma, type II vs. renal oncocytoma
North Carolina (Mount Area Pathology) - Oncocytoma (2)
Ohio (McCullough-Hyde Memorial Hospital) - Oncocytoma
Oklahoma, Tulsa - Renal cell carcinoma, granular cell type
Pennsylvania (Drexel University College of Medicine) - Renal cell papillary carcinoma, oncocytic type
Pennsylvania (Lehigh Valley Hospital) - Oncocytoma
Pennsylvania (Magee Women's Hospital) - Oncocytoma
Pennsylvania (Mt. Nittany Medical Center) - Oncocytoma with hemorrhage
Pennsylvania (Pennsylvania Hospital Residents) - Papillary renal cell carcinoma
Puerto Rico (University of Puerto Rico) - Papillary renal cell carcinoma
South Dakota (University of South Dakota Residents) - Oncocytoma
Tennessee, Kingsport - Oncocytoma
Texas (Scott & White Memorial Hospital) - Oncocytoma
Texas, Houston - Renal cell carcinoma
Texas, Lubbock - Renal cell carcinoma, oncocytic type
Washington (Madigan Army Medical Center) - Papillary renal cell (10); Oncocytoma (2)
West Virginia (Greenbrier Valley Medical Center) - Chromophobe renal cell carcinoma
Case 9 – Diagnosis:
Renal cell carcinoma with papillary and tubulocystic features, kidney
T-71000, M-83123

Case 9 – References:
MacLennan GT and Bostwick DG. Tubulocystic Carcinoma, Mucinous Tubular and Spindle Cell Carcinoma and Other Recently Described Rare Renal Tumors. Clin in Lab Med 2005; 25(2):393-416.

Case No. 10, Accession No. 30233
February 2007

Alameda (Alameda County Medical Center) - Collecting duct carcinoma
Fontana (Kaiser Permanente) - Mucinous tubular and spindle cell carcinoma of kidney
Granada Hills - Collecting duct carcinoma
Long Beach - Invasive urothelial carcinoma, high grade
Long Beach (Long Beach Veterans Hospital) - Collecting duct carcinoma (2); High grade transitional (urothelial) carcinoma (1)
Los Angeles - Carcinosarcoma
Monterey (Community Hospital of Monterey Peninsula) - Urothelial cell carcinoma (2); Carcinoma of collecting duct of Bellini (1)
Oakland - Alveolar rhabdomyosarcoma
Orange (Orange County Pathology Medical Group) - Invasive high grade urothelial carcinoma
Oxnard (St. John’s Regional Medical Center) - Sarcomatoid carcinoma (1); Collecting duct carcinoma (3)
San Diego - Renal cell carcinoma, collecting duct type
San Diego (Naval Medical Center San Diego) - Transitional cell carcinoma of the renal pelvis
San Diego ( Scripps Health) - Collecting duct carcinoma
San Diego (UCSD) - Collecting duct carcinoma
San Francisco (San Francisco General Hospital) - Collecting duct carcinoma
Santa Barbara - Collecting duct renal cell carcinoma
Santa Rosa (Santa Rosa Memorial Hospital) - Transitional cell carcinoma (2); Urothelial carcinoma, invading kidney (1)
Woodland Hills (Kaiser Permanente) - Sarcomatoid renal cell carcinoma
Woodland Hills (Suda’s Soldiers) - Synovial sarcoma vs. collecting duct carcinoma
Arkansas (University of Arkansas for Medical Sciences) - Collecting duct carcinoma, kidney
Georgia, Decatur - Collecting duct carcinoma
Illinois, Burr Ridge - Collecting duct carcinoma (1); Mucinous tubular and spindle cell carcinoma (1)
Illinois ( Loyola University Medical Center) - Merkel cell tumor
Maryland (Northwest Hospital Center) - Collecting duct tumor
Maryland (University of Maryland) - Collecting duct carcinoma
Massachusetts (Beverly Hospital) - Collecting duct renal cell carcinoma
Michigan (Oakwood Hospital) - Invasive urothelial carcinoma, high grade
Minnesota ( Fairview Ridges Hospital) - Collecting duct carcinoma
Nebraska (Creighton University School of Medicine) - Collecting duct carcinoma
New Mexico (University of New Mexico) - Carcinoma of the collecting ducts of Bellini
New York (Long Island Jewish Medical Center) - Carcinoma of the collecting duct of Bellini
New York (Nassau University Medical Center) - Urothelial carcinoma, high grade, invasive
New York (Stony Brook University Hospital) - Carcinoma of the collecting ducts of Bellini
New York (SUNY Downstate Medical Center) - Angiosarcoma vs. collecting duct carcinoma
North Carolina (Mount Area Pathology) - Collecting duct carcinoma (2)
Ohio (McCullough-Hyde Memorial Hospital) - Collecting duct renal cell carcinoma
Oklahoma, Tulsa - Urothelial carcinoma, high grade
Pennsylvania (Drexel University College of Medicine) - Mucinous tubular spindle cell carcinoma
Pennsylvania (Lehigh Valley Hospital) - Collecting duct carcinoma
Pennsylvania (Magee Women's Hospital) - Sarcomatoid variant of transitional cell carcinoma
Pennsylvania (Mt. Nittany Medical Center) - Xanthogranulomatous pyelonephritis
Pennsylvania (Pennsylvania Hospital Residents) - Collecting duct carcinoma
Puerto Rico (University of Puerto Rico) - Collecting duct carcinoma
South Dakota (University of South Dakota Residents) - Collecting duct carcinoma
Tennessee, Kingsport - Collecting duct carcinoma
Texas (Scott & White Memorial Hospital) - Mucinous tubular and spindled cell carcinoma
Texas, Houston - Sarcomatoid renal cell carcinoma
Texas, Lubbock - High grade urothelial carcinoma
Washington (Madigan Army Medical Center) - Collecting duct carcinoma (12)
West Virginia (Greenbrier Valley Medical Center) - Collecting duct renal cell carcinoma
Australia (Royal Hobart Hospital) - High grade invasive urothelial carcinoma
Australia (Royal Prince Alfred Hospital) - Invasive urothelial carcinoma
Australia (Sullivan Nicolaides Pathology) - Collecting duct carcinoma
Brazil (Laboratorio Anatomia Patologica Ectologia) - High grade urothelial carcinoma
Brazil, Sao Paulo - High grade urothelial carcinoma vs. carcinoma of the collecting ducts
Canada (Pasqua Hospital) - Urothelial carcinoma
Canada, Saskatoon - Collecting duct renal cell carcinoma
Canada (Sherbrooke University Hospital) - Collecting duct carcinoma
India, Karnataka - Urothelial carcinoma renal pelvis
Ireland (Kerry General Hospital) - Collecting duct carcinoma
Jamaica (The University of West Indies) - Collecting duct carcinoma
Japan (Kyoto University Hospital) - Collecting duct carcinoma
Oman (Khoula Hospital) - Infiltrating urothelial carcinoma, high grade
Qatar (Hamad Medical Corporation) - Collecting duct carcinoma
Saudi Arabia (King Fahad National Guard Hospital) - Collecting duct carcinoma
Saudi Arabia (Maternity and Children's Hospital) - Metanephric adenosarcoma
The Netherlands, Amstelveen - Collecting duct carcinoma
United Kingdom (Oxford Study Group) - Collecting duct carcinoma

**Case 10 - Diagnosis:**
Collecting duct carcinoma, kidney
T-71000, M-83123

**Case 10 - References:**