



CALIFORNIA
TUMOR TISSUE REGISTRY

GENITOURINARY PATHOLOGY

Minutes – Subscription A

September 2014



SUGGESTED READING (General Topics from Recent Literature):

- Recavarren RA, Houser PM, Yang J. Potential Pitfalls of Needle Tract Effects on Repeat Thyroid Fine-Needle Aspiration. *Cancer Cytopathol* 2013;121:155-161.
- Shiokawa M, Kodama Y, et al. Risk of Cancer in Patients With Autoimmune Pancreatitis. *Am J Gastroenterol* 2013;109:610-617.
- Kryvenko ON, Gupto NS, et al. Gleason Score 7 Adenocarcinoma of the Prostate With Lymph Node Metastases: Analysis of 184 Radical Prostatectomy Specimens. *Arch Pathol Lab Med* 2013;137:610-617.
- Luong-Player A, Liu H, et al. Immunohistochemical Reevaluation of Carbonic Anhydrase IX (CA IX) Expression in Tumors and Normal Tissues. *Am J Clin Pathol* 2014;141: 219-225.
- Gurda GT, Baras AS, Kurman RJ. Ki-67 Index as an Ancillary Tool in the Differential Diagnosis of Proliferative Endometrial Lesions With Secretory Change. *Int J Gynecol Pathol* 2014;33:114-119.

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FILE DIAGNOSES

CTTR Subscription A

September 2014

Case 1:

Adult autosomal dominant polycystic kidney disease

Case 2:

Angiomyolipoma, kidney

Case 3:

Congenital mesoblastic nephroma, kidney

Case 4:

Oncocytoma, kidney

Case 5:

Nephroblastoma (Wilms tumor), kidney

Case 6:

Renal cell carcinoma, clear cell type, kidney

Case 7:

Small cell carcinoma (high grade neuroendocrine carcinoma), bladder and prostate

Case 8:

Congenital mesoblastic nephroma (classic type), kidney

Case 9:

Invasive squamous cell carcinoma, penis

Case 10:

Paratesticular embryonal rhabdomyosarcoma

Alameda (Alameda County Medical Center) - Polycystic kidney disease
Fontana (Kaiser Foundation Hospital) - Benign cyst
Hayward Fremont (St. Rose Hospital) - Acquired cystic disease of dialysis
Long Beach (Long Beach Veterans Hospital) - Polycystic kidney disease
San Francisco (San Francisco General Hospital) - Polycystic kidney
Woodland Hills (Kaiser Permanente) - Acquired cystic kidney disease
Arkansas (Associated Pathologist Laboratory) - Acquired cystic kidney disease
Colorado (Fort Collins) - Adult polycystic kidney renal disease
Florida (Atlantic University) - Adult polycystic kidney disease
Florida (GastroEnterology Associates of Ocala) - Acquired renal cystic disease
Georgia (Wellstar Healthcare System) - Acquired cystic kidney disease (3)
Georgia, Atlanta - Adult polycystic kidney disease
Illinois (Heartland Regional Medical Center) - Autosomal dominant polycystic kidney disease
Illinois, Oak Brook - Autosomal dominant polycystic kidney disease
Iowa (Allen Memorial Hospital) - Adult polycystic kidney disease
Maryland (University of Maryland Medical Center) - Multicystic renal cell carcinoma
Michigan (William Beaumont Hospital) - Acquired cystic kidney disease
Minnesota (Fairview Ridges Hospital) - Autosomal dominant, polycystic kidney disease
Nebraska (Creighton University Medical Center) - Acquired renal cystic disease (ARCD)
Ohio (Cleveland Clinic Pathology Residents) - Cystic kidney consistent with dialysis
Ohio (University of Toledo Medical Center Residents) - Acquired cystic kidney disease
Pennsylvania (College of Medicine) - Adult polycystic kidney disease
Pennsylvania (Lehigh Valley Hospital) - Polycystic kidney, adult type
Puerto Rico (University of Puerto Rico) - Acquired cystic disease dialysis related vs. polycystic renal disease
San Diego (Naval Medical Center) - Acquired polycystic kidney disease
South Dakota (University of South Dakota Armed Forces) - Acquired renal cystic disease
Texas (Crystal Beach) - Adult polycystic kidney
Texas, Lubbock - Autosomal dominant polycystic kidney
Wisconsin, Milwaukee - Acquired cystic disease associated renal cell carcinoma
Canada (Pasqua Hospital) - Acquired cystic disease
India (Sri Siddhartha Medical College) - Dialysis associated acquired renal cystic disease
Ireland (Bon Secours Hospital) - Acquired renal cystic disease
Ireland (Kerry General Hospital) - Acquired renal cystic disease
Ireland (Mayo General Hospital) - Acquired renal cystic disease
Japan, Tokyo - Atrophic kidney with clear cell carcinoma
Japan (University of Yamanashi) - Cystic nephroma (1); Simple cysts (1)
Japan (Wakayama Medical University) - Dialysis-associated acquired cystic kidney disease
Oman (Khoula Hospital) - Acquired renal cystic disease
Spain (Hospital Xeral) - Adult dominant polycystic kidney disease

Case 1 - Diagnosis:

Adult autosomal dominant polycystic kidney disease

Case 1 - References:

The natural history of autosomal dominant polycystic kidney disease: 30-year experience from a single centre. *QJM* 2013; Jul;106(7): p639-46. Thong KM; Ong AC.
 Autosomal dominant polycystic kidney disease: recent advances in pathogenesis and potential therapies. *Clin Exp Nephrol* 2013; Jun;17(3): p317-26. Mochizuki T; Tsuchiya K; Nitta K.
 Genomic instability in patients with autosomal-dominant polycystic kidney disease. *J Int Med Res* 2013; Feb;41(1): p169-75. Li M; Qin S; Wang L; Zhou J.
 The great pretender: autosomal dominant polycystic kidney disease. *Adv NPs PAs* 2014; Jan;5(1): p18-9. Chettiar A; Jennings L.

Changing referral characteristics of patients with autosomal dominant polycystic kidney disease. *Am J Med* 2013; Sep;126(9): p832.e7-832.e11. Helal I; McFann K; Reed B; Yan XD; Schrier RW.

Case No. 2, Accession No. 28241

September 2014

Alameda (Alameda County Medical Center) - Angiomyolipoma
Fontana (Kaiser Foundation Hospital) - Angiomyolipoma
Hayward Fremont (St. Rose Hospital) - Angiomyolipoma
Long Beach (Long Beach Veterans Hospital) - Angiomyolipoma
San Francisco (San Francisco General Hospital) - Angiomyolipoma
Woodland Hills (Kaiser Permanente) - Angiomyolipoma
Arkansas (Associated Pathologist Laboratory) - Angiomyolipoma
Colorado (Fort Collins) - Angiomyolipoma
Florida (Atlantic University) - Angiomyolipoma
Florida (GastroEnterology Associates of Ocala) - Angiomyolipoma, malignant
Georgia, Atlanta - Angiomyolipoma
Georgia (Wellstar Healthcare System) - Angiomyolipoma (4); Multicystic kidney (1)
Illinois (Heartland Regional Medical Center) - Angiomyolipoma
Illinois, Oak Brook - Angiomyolipoma
Iowa (Allen Memorial Hospital) - Angiomyolipoma
Maryland (University of Maryland Medical Center) - Angiomyolipoma
Michigan (William Beaumont Hospital) - Angiomyolipoma
Minnesota (Fairview Ridges Hospital) - Angiomyolipoma
Nebraska (Creighton University Medical Center) - Angiomyolipoma
Ohio (Cleveland Clinic Pathology Residents) - Angiomyolipoma
Ohio (University of Toledo Medical Center Residents) - Angiomyolipoma
Pennsylvania (College of Medicine) - Angiomyolipoma
Pennsylvania (Lehigh Valley Hospital) - Angiomyolipoma
Puerto Rico (University of Puerto Rico) - Angiomyolipoma
San Diego (Naval Medical Center) - Angiomyolipoma
South Dakota (University of South Dakota Armed Forces) - Angiomyolipoma
Texas (Crystal Beach) - Renal cell carcinoma, granular cell type
Texas, Lubbock - Angiomyolipoma
Wisconsin, Milwaukee - Angiomyolipoma
Canada (Pasqua Hospital) - Angiomyolipoma
India (Sri Siddhartha Medical College) - Angiomyolipoma
Ireland (Bon Secours Hospital) - Angiomyolipoma
Ireland (Kerry General Hospital) - Angiomyolipoma
Ireland (Mayo General Hospital) - Sarcomatoid renal cell carcinoma
Japan, Tokyo - Epithelioid angiomyolipoma
Japan (University of Yamanashi) - Angiomyolipoma
Japan (Wakayama Medical University) - Angiomyolipoma
Oman (Khoula Hospital) - Angiomyolipoma
Spain (Hospital Xeral) - Angiomyolipoma

Case 2 - Diagnosis:

Angiomyolipoma, kidney

Case 2 - References:

Changing trends in presentation, diagnosis and management of renal angiomyolipoma: comparison of sporadic and tuberous sclerosis complex-associated forms. *Urology* 2008; Nov;72(5): p1077-82. Seyam RM; Bissada NK, et al.
Hepatic angiomyolipoma. *Arch Pathol Lab Med* 2008; Oct;132(10): p1679-82. Petrolla AA; Xin W.
Retroperitoneal extrarenal angiomyolipomas: an evidence-based approach to a rare clinical entity. *Case Rep Nephrol* 2012; 2012:374107 Minja EJ; Pellerin M; Saviano N; Chamberlain RS.
Expression of E-cadherin in angiomyolipoma. *Hum Pathol* 2012; Dec;43(12): p2348-53. Wang Z; Gong Q; Fan Q.

Pelvic angiomyolipoma. *Urology* 2012; Feb;79(2): pe15-6. Nicholson TM; Lloyd GL; Wu G.
 Epithelioid angiomyolipoma: a morphologically distinct variant that mimics a variety of intra-abdominal neoplasms.
Arch Pathol Lab Med 2011; May;135(5): p665-70 Mete O; van der Kwast TH.

Case No. 3, Accession No. 14418

September 2014

Alameda (Alameda County Medical Center) - Multicystic renal dysplasia
Fontana (Kaiser Foundation Hospital) - Cystic partially differentiated nephroblastoma
Hayward Fremont (St. Rose Hospital) - Multicystic nephroma
Long Beach (Long Beach Veterans Hospital) - Neuroblastoma
San Francisco (San Francisco General Hospital) - Mesoblastic nephroma
Woodland Hills (Kaiser Permanente) - Congenital mesoblastic nephroma
Arkansas (Associated Pathologist Laboratory) - Cystic, partially differentiated nephroblastoma
Colorado (Fort Collins) - Wilms tumor (nephroblastoma)
Florida (Atlantic University) - Clear cell sarcoma of the kidney
Florida (GastroEnterology Associates of Ocala) - Wilms tumor, blastoma pattern, diffuse
Georgia, Atlanta - Cellular mesoblastic nephroma
Georgia (Wellstar Healthcare System) - Metanephric stromal tumor or mesoblastic nephroma (3); Cystic nephroblastoma (1)
Illinois (Heartland Regional Medical Center) - Clear cell sarcoma
Illinois, Oak Brook - Congenital mesonephric adenoma
Iowa (Allen Memorial Hospital) - Metanephric stromal tumor
Maryland (University of Maryland Medical Center) - Clear cell sarcoma
Michigan (William Beaumont Hospital) - Clear cell sarcoma
Minnesota (Fairview Ridges Hospital) - Metanephric stromal tumor
Nebraska (Creighton University Medical Center) - Multicystic renal dysplasia
Ohio (Cleveland Clinic Pathology Residents) - Clear cell sarcoma
Ohio (University of Toledo Medical Center Residents) - Clear cell sarcoma of the kidney
Pennsylvania (College of Medicine) - Cystic nephroma
Pennsylvania (Lehigh Valley Hospital) - Mesoblastic nephroma, mixed type
Puerto Rico (University of Puerto Rico) - Cystic partially differentiated nephroblastoma
San Diego (Naval Medical Center) - Congenital mesoblastic nephroma, mixed type
South Dakota (University of South Dakota Armed Forces) - Congenital mesoblastic nephroma
Texas (Crystal Beach) - Mesoplastic nephrous vs. Wilms tumor blastoma predominant
Texas, Lubbock - Clear cell sarcoma
Wisconsin, Milwaukee - Clear cell sarcoma
Canada (Pasqua Hospital) - Congenital mesoblastic nephroma
India (Sri Siddhartha Medical College) - Cystic partially differentiated nephroblastoma
Ireland (Bon Secours Hospital) - Congenital mesoblastic nephroma
Ireland (Kerry General Hospital) - Multicystic nephroma
Ireland (Mayo General Hospital) - Wilms tumor
Japan, Tokyo - Clear cell carcinoma
Japan (University of Yamanashi) - Clear cell sarcoma
Japan (Wakayama Medical University) - Congenital mesoblastic nephroma, mixed type
Oman (Khoula Hospital) - Clear cell sarcoma
Spain (Hospital Xeral) - Cystic Wilms tumor

Case 3 - Diagnosis:

Congenital mesoblastic nephroma

Case 3 - References:

Cytodiagnosis of congenital mesoblastic nephroma: a case report. *Diagn Cytopathol* 2013; Mar;41(3): p234-8. Kulkarni MP; Gosavi AV, et al.
 Congenital mesoblastic nephroma. *J Urol* 2010; Mar;183(3): p1188-9. Gruver AM; Hansel DE, et al.

Cellular mesoblastic nephroma in an infant: report of the cytologic diagnosis of a rare paediatric renal tumor. *Diagn Cytopathol* 2009; May;37(5): p377-80. Gupta R; Mathur SR, et al.
 Unusual morphology in mesoblastic nephroma. *Pediatr Surg Int* 2009; Jan;25(1): p109-12. Bandyopadhyay R; Chatterjee U, et al.
 Mesoblastic nephroma: a report of the United Kingdom Children's Cancer and Leukaemia Group (CCLG). *Pediatr Blood Cancer* 2011; May;56(5): p744-8. England RJ; Haider N, et al.

Case No. 4, Accession No. 29775

September 2014

Alameda (Alameda County Medical Center) - Oncocytoma
Fontana (Kaiser Foundation Hospital) - Hybrid oncocytic chromophobe tumor
Hayward Fremont (St. Rose Hospital) - Oncocytoma
Long Beach (Long Beach Veterans Hospital) - Oncocytoma
San Francisco (San Francisco General Hospital) - Oncocytoma
Woodland Hills (Kaiser Permanente) - Oncocytoma
Arkansas (Associated Pathologist Laboratory) - Oncocytoma
Colorado (Fort Collins) - Oncocytoma
Florida (Atlantic University) - Oncocytoma
Florida (GastroEnterology Associates of Ocala) - Oncocytoma
Georgia, Atlanta - Renal oncocytoma
Georgia (Wellstar Healthcare System) - Oncocytoma (4)
Illinois (Heartland Regional Medical Center) - Oncocytoma
Illinois, Oak Brook - Oncocytoma
Iowa (Allen Memorial Hospital) - Oncocytoma
Maryland (University of Maryland Medical Center) - Oncocytoma
Michigan (William Beaumont Hospital) - Oncocytoma
Minnesota (Fairview Ridges Hospital) - Oncocytoma
Nebraska (Creighton University Medical Center) - Oncocytoma
Ohio (Cleveland Clinic Pathology Residents) - Oncocytoma
Ohio (University of Toledo Medical Center Residents) - Oncocytoma
Pennsylvania (College of Medicine) - Oncocytoma
Pennsylvania (Lehigh Valley Hospital) - Oncocytoma
Puerto Rico (University of Puerto Rico) - Oncocytoma
San Diego (Naval Medical Center) - Oncocytoma
South Dakota (University of South Dakota Armed Forces) - Oncocytoma
Texas (Crystal Beach) - Renal oncocytoma
Texas, Lubbock - Renal cell carcinoma, oncocytic type
Wisconsin, Milwaukee - Renal cell carcinoma
Canada (Pasqua Hospital) - Oncocytoma
India (Sri Siddhartha Medical College) - Oncocytoma
Ireland (Bon Secours Hospital) - Oncocytoma
Ireland (Kerry General Hospital) - Oncocytoma
Ireland (Mayo General Hospital) - Renal oncocytoma
Japan, Tokyo - Chromophobe carcinoma
Japan (University of Yamanashi) - Oncocytoma
Japan (Wakayama Medical University) - Oncocytoma
Oman (Khoula Hospital) - Oncocytoma
Spain (Hospital Xeral) - Oncocytoma

Case 4 - Diagnosis:

Oncocytoma, kidney

Case 4 - References:

Fine needle aspiration diagnosis of renal oncocytoma. A mathematical morphologic approach. *Anal Quant Cytol Histol* 1993; Jun;15(3): p220-6. Garcia-Bonafe M, et al.

The impact of location and number of cores on the diagnostic accuracy of renal mass biopsy: an ex vivo study. *World J Urol* 2013; Oct;31(5): p1159-64. Hobbs DJ; Zhou M, et al.

Uselessness of radiological differentiation of oncocytoma and renal cell carcinoma in management of small renal masses. *World J Urol* 2013; Aug;31(4): p1013-4. Pusiol T; Zorzi MG, et al.

Renal oncocytoma revisited: a clinicopathological study of 109 cases with emphasis on problematic diagnostic features. *Histopathology* 2010; Dec;57(6): p893-906. Trpkov K; Yilmaz A, et al.

Oncocytoma of the kidney with prominent intracytoplasmic lumina. *Ann Diagn Pathol* 2011; Dec;15(6): p485-9. Lau SK; Cohen AH; Luthringer DJ.

Immunohistochemical stain for cytokeratin 7, S100A1 and claudin 8 is valuable in differential diagnosis of chromophobe renal cell carcinoma from renal oncocytoma. *Histopathology* 2009; Apr;54(5): p633-5. Kim SS; Choi YD, et al.

Does CD10 immunoexpression have a diagnostic utility in the differential diagnosis of renal oncocytomas and eosinophilic variants of chromophobe renal cell carcinomas? *Pathology* 2009; Feb;41(2): p191-3. Mete O; Kilicaslan I; Uysal V.

Case No. 5, Accession No. 31797

September 2014

Alameda (Alameda County Medical Center) - Nephroblastoma (Wilms tumor)

Fontana (Kaiser Foundation Hospital) - Nephroblastoma

Hayward Fremont (St. Rose Hospital) - Wilms tumor

Long Beach (Long Beach Veterans Hospital) - Classic Wilms tumor

San Francisco (San Francisco General Hospital) - Nephroblastoma

Woodland Hills (Kaiser Permanente) - Nephroblastoma

Arkansas (Associated Pathologist Laboratory) - Nephroblastoma

Colorado (Fort Collins) - Neuroblastoma

Florida (Atlantic University) - Wilms tumor

Florida (GastroEnterology Associates of Ocala) - Wilms tumor, anaplastic (unfavorable)

Georgia, Atlanta - Nephroblastoma (Wilms tumor)

Georgia (Wellstar Healthcare System) - Wilms tumor (3); Nephroblastoma (1)

Illinois (Heartland Regional Medical Center) - Nephroblastoma

Illinois, Oak Brook - Nephroblastoma

Iowa (Allen Memorial Hospital) - Wilms tumor (nephroblastoma)

Maryland (University of Maryland Medical Center) - Nephroblastoma

Michigan (William Beaumont Hospital) - Nephroblastoma

Minnesota (Fairview Ridges Hospital) - Nephroblastoma

Nebraska (Creighton University Medical Center) - Wilms tumor (favorable histology)

Ohio (Cleveland Clinic Pathology Residents) - Nephroblastoma

Ohio (University of Toledo Medical Center Residents) - Wilms tumor

Pennsylvania (College of Medicine) - Nephroblastoma (Wilms tumor)

Pennsylvania (Lehigh Valley Hospital) - Nephroblastoma

Puerto Rico (University of Puerto Rico) - Wilms tumor

San Diego (Naval Medical Center) - Wilms tumor

South Dakota (University of South Dakota Armed Forces) - Wilms tumor

Texas (Crystal Beach) - Nephroblastoma

Texas, Lubbock - Wilms tumor

Wisconsin, Milwaukee - Nephroblastoma (Wilms)

Canada (Pasqua Hospital) - Wilms tumor

India (Sri Siddhartha Medical College) - Wilms tumor

Ireland (Bon Secours Hospital) - Wilms tumor

Ireland (Kerry General Hospital) - Wilms tumor

Ireland (Mayo General Hospital) - Wilms tumor

Japan, Tokyo - Nephroblastoma

Japan (University of Yamanashi) - Nephroblastoma

Japan (Wakayama Medical University) - Nephroblastoma

Oman (Khoulia Hospital) - Nephroblastoma

Spain (Hospital Xeral) - Wilms tumor

Case 5 - Diagnosis:

Nephroblastoma (Wilms tumor), kidney

Case 5 - References:

p53 Immunohistochemistry expression in Wilms tumor: a prognostic tool in the detection of tumor aggressiveness. *J Urol* 2013; Feb;189(2): p664-70. Franken J; Lerut E, et al.
Rhabdomyomatous differentiation in Wilms tumor pulmonary metastases: a case report and literature review. *Ann Clin Lab Sci* 2012; Fall;42(4): p409-16. Seifert RP; McNab P, et al.
Adult Wilms' tumor: review of literature. *J Oncol Pharm Pract* 2012; Mar;18(1): p148-51. Ali EM; Elnashar AT.
The Perlman syndrome: familial renal dysplasia with Wilms tumor, fetal gigantism and multiple congenital anomalies. 1984. *Am J Med Genet A* 2013; Nov;161A(11): p2691-6. Neri G; Martini-Neri ME, et al.
The many facets of the Wilms' tumour gene, WT1. *Hum Mol Genet* 2006; Oct 15;15 Spec No 2:R196-201. Hohenstein P; Hastie ND.
Gain of 1q is a marker of poor prognosis in Wilms' tumors. *Genes Chromosomes Cancer* 2013; Nov;52(11): p1065-74 Segers H; van den Heuvel-Eibrink MM, et al.

Case No. 6, Accession No. 31789

September 2014

Alameda (Alameda County Medical Center) - Renal cell carcinoma
Fontana (Kaiser Foundation Hospital) - Paraganglioma
Hayward Fremont (St. Rose Hospital) - Collecting duct carcinoma
Long Beach (Long Beach Veterans Hospital) - High grade renal cell carcinoma (clear cell type)
San Francisco (San Francisco General Hospital) - Chromophobe renal cell carcinoma
Woodland Hills (Kaiser Permanente) - Chromophobe renal cell carcinoma
Arkansas (Associated Pathologist Laboratory) - Renal cell carcinoma, clear cell type
Colorado (Fort Collins) - Collecting duct carcinoma
Florida (Atlantic University) - Carcinoma with rhabdoid and clear cell features
Florida (GastroEnterology Associates of Ocala) - Renal cell carcinoma, clear cell variant
Georgia, Atlanta - Urothelial carcinoma
Georgia (Wellstar Healthcare System) - Renal cell carcinoma, clear cell type (4)
Illinois (Heartland Regional Medical Center) - Urothelial carcinoma, high grade, invasive
Illinois, Oak Brook - Sarcomatoid renal cell carcinoma
Iowa (Allen Memorial Hospital) - Renal cell carcinoma, clear cell type, high grade
Maryland (University of Maryland Medical Center) - Clear cell carcinoma
Michigan (William Beaumont Hospital) - Chromophobe renal cell carcinoma
Minnesota (Fairview Ridges Hospital) - Paraganglioma
Nebraska (Creighton University Medical Center) - Clear cell renal cell carcinoma with sarcomatoid features
Ohio (Cleveland Clinic Pathology Residents) - Paraganglioma
Ohio (University of Toledo Medical Center Residents) - Renal cell carcinoma, clear cell
Pennsylvania (College of Medicine) - Collecting duct carcinoma
Pennsylvania (Lehigh Valley Hospital) - Collecting duct carcinoma
Puerto Rico (University of Puerto Rico) - Clear cell renal carcinoma, rule out urothelial nested cell variant
San Diego (Naval Medical Center) - Clear cell urothelial carcinoma
South Dakota (University of South Dakota Armed Forces) - Paraganglioma
Texas (Crystal Beach) - Renal cell carcinoma, chromphobe cell type
Texas, Lubbock - Renal cell carcinoma, clear cell type, Fuhrman nuclear grade 2
Wisconsin, Milwaukee - Clear cell papillary renal cell carcinoma
Canada (Pasqua Hospital) - Paraganglioma
India (Sri Siddhartha Medical College) - Collecting duct carcinoma
Ireland (Bon Secours Hospital) - Paraganglioma
Ireland (Kerry General Hospital) - Tubulocystic carcinoma
Ireland (Mayo General Hospital) - Collecting duct (Bellini) carcinoma
Japan, Tokyo - Chromophobe carcinoma

Japan (University of Yamanashi) - Clear renal cell carcinoma
Japan (Wakayama Medical University) - Clear cell renal cell carcinoma, grade 3
Oman (Khoula Hospital) - Clear cell renal cell carcinoma
Spain (Hospital Xeral) - Paraganglioma

Case 6 - Diagnosis:

Renal cell carcinoma, clear cell type, kidney

Case 6 - References:

Clear cell renal cell carcinoma with a syncytial-type multinucleated giant tumor cell component: implications for differential diagnosis. *Hum Pathol* 2014; Apr;45(4): p735-44. Williamson SR; Kum JB, et al.
Clear cell papillary renal cell carcinoma is the fourth most common histologic type of renal cell carcinoma in 290 consecutive nephrectomies for renal cell carcinoma. *Hum Pathol* 2014; Jan;45(1): p59-64. Zhou H; Zheng S, et al.
Mucin-secreting clear cell renal cell carcinoma. A rare variant of conventional renal cell carcinoma. *Ann Diagn Pathol* 2013; Apr;17(2): p226-9. Val-Bernal JF; Salcedo W, et al.
Molecular genetics of clear-cell renal cell carcinoma. *J Clin Oncol* 2014; Jun 20;32(18): p1968-76. Brugarolas J
Deletions of chromosomes 3p and 14q molecularly subclassify clear cell renal cell carcinoma. *Cancer* 2013; Apr 15;119(8): p1547-54. Kroeger N; Klatte T, et al.
A solitary polypoid gastric metastasis 20 years after renal cell carcinoma: an event to be considered, and a brief review of the literature. *Pathologica* 2013; Aug;105(4): p132-6. Onorati M; Petracco G, et al.

Case No. 7, Accession No. 30563

September 2014

Alameda (Alameda County Medical Center) - Small cell neuroendocrine carcinoma
Fontana (Kaiser Foundation Hospital) - Small cell neuroendocrine carcinoma
Hayward Fremont (St. Rose Hospital) - Small cell neuroendocrine carcinoma
Long Beach (Long Beach Veterans Hospital) - Invasive poorly differentiated carcinoma (favor poorly differentiated high grade neuroendocrine carcinoma)
San Francisco (San Francisco General Hospital) - Mixed small cell and urothelial carcinoma with glandular differentiation
Woodland Hills (Kaiser Permanente) - Small cell carcinoma
Arkansas (Associated Pathologist Laboratory) - Small cell carcinoma
Colorado (Fort Collins) - High grade neuroendocrine carcinoma
Florida (Atlantic University) - Small cell carcinoma of the bladder with early invasive urothelial carcinoma
Florida (GastroEnterology Associates of Ocala) - Lymphoma (non-Hodgkin) vs. poorly differentiated transitional cell carcinoma
Georgia, Atlanta - Poorly differentiated neuroendocrine (small cell carcinoma)
Georgia (Wellstar Healthcare System) - Poor differentiated carcinoma with neuroendocrine features (1); Small cell carcinoma (2); High grade carcinoma with neuroendocrine differentiation (1)
Illinois (Heartland Regional Medical Center) - Poorly differentiated carcinoma, small cell type
Illinois, Oak Brook - Poorly differentiated urothelial carcinoma
Iowa (Allen Memorial Hospital) - Small cell carcinoma
Maryland (University of Maryland Medical Center) - Urothelial carcinoma with predominant small cell component
Michigan (William Beaumont Hospital) - Small cell carcinoma
Minnesota (Fairview Ridges Hospital) - High grade neuroendocrine carcinoma
Nebraska (Creighton University Medical Center) - Small cell carcinoma
Ohio (Cleveland Clinic Pathology Residents) - Small cell carcinoma
Ohio (University of Toledo Medical Center Residents) - Small cell carcinoma
Pennsylvania (College of Medicine) - Small cell carcinoma
Pennsylvania (Lehigh Valley Hospital) - Small cell carcinoma
Puerto Rico (University of Puerto Rico) - Small cell carcinoma of urinary bladder concurrent with infiltrating high grade urothelial carcinoma
San Diego (Naval Medical Center) - Small cell carcinoma of the bladder
South Dakota (University of South Dakota Armed Forces) - Small cell carcinoma
Texas (Crystal Beach) - Transitional carcinoma, high grade

Texas, Lubbock - High grade urothelial carcinoma
Wisconsin, Milwaukee - Urothelial carcinoma in-situ with small cell carcinoma
Canada (Pasqua Hospital) - Small cell carcinoma
India (Sri Siddhartha Medical College) - Small cell neuroendocrine carcinoma
Ireland (Bon Secours Hospital) - Small cell carcinoma
Ireland (Kerry General Hospital) - Small cell carcinoma
Ireland (Mayo General Hospital) - Small cell carcinoma
Japan, Tokyo - Small cell carcinoma
Japan (University of Yamanashi) - Small cell carcinoma with high grade papillary urothelial carcinoma
Japan (Wakayama Medical University) - Small cell carcinoma
Oman (Khoula Hospital) - Small cell carcinoma
Spain (Hospital Xeral) - Neuroendocrine (small cell carcinoma)

Case 7 - Diagnosis:

Small cell carcinoma (high grade neuroendocrine carcinoma), bladder and prostate

Case 7 - References:

Different subtypes of carcinoma in situ of the bladder do not have a different prognosis. *Virchows Arch* 2013; Mar;462(3): p343-8. Comperat E; Jacquet SF, et al.
 Characterization and outcomes of small cell carcinoma of the bladder using the surveillance, epidemiology, and end results database. *Am J Clin Oncol* 2013; Apr;36(2): p126-31. Schreiber D; Rineer J, et al.
 Small cell carcinoma of the bladder: a search of the current literature. *J BUON* 2013; Jan-Mar;18(1): p220-6. Gkirklemis K; Miliadou A, et al.
 A clinical review of small-cell carcinoma of the urinary bladder. *Clin Genitourin Cancer* 2013; Jun;11(2): p73-7. Thota S; Kistangari G, et al.
 Cytological Diagnosis of Small Cell Carcinoma of Urinary Bladder in a Patient with CLL. *Cell J* 2014; Feb 3;16(1): p95-8 Guler Simsek G; Guresci S, et al.
 Pure primary small cell carcinoma of urinary bladder: A rare diagnostic entity. *Urol Ann* 2013; Jul;5(3): p209-11. Gon S; Majumdar B, et al.

Case No. 8, Accession No. 30110

September 2014

Alameda (Alameda County Medical Center) - Congenital mesoblastic nephroma
Fontana (Kaiser Foundation Hospital) - Congenital mesoblastic nephroma
Hayward Fremont (St. Rose Hospital) - Mesoblastic nephroma
Long Beach (Long Beach Veterans Hospital) - Mesoblastic nephroma
San Francisco (San Francisco General Hospital) - Congenital mesoblastic nephroma
Woodland Hills (Kaiser Permanente) - Congenital mesoblastic nephroma
Arkansas (Associated Pathologist Laboratory) - Congenital mesoblastic nephroma
Colorado (Fort Collins) - Cellular mesoblastic nephroma
Florida (Atlantic University) - Mesoblastic nephroma
Florida (GastroEnterology Associates of Ocala) - Mesoblastic nephroma
Georgia, Atlanta - Mesoblastic nephroma, classic type
Georgia (Wellstar Healthcare System) - Congenital mesoblastic nephroma or mesonephric stromal tumor (1)
 Mesoblastic nephroma (1); Metanephric stromal tumor (2)
Illinois (Heartland Regional Medical Center) - Congenital mesoblastic nephroma
Illinois, Oak Brook - Mesoblastic nephroma
Iowa (Allen Memorial Hospital) - Congenital mesoblastic nephroma
Maryland (University of Maryland Medical Center) - Mesoblastic nephroma
Michigan (William Beaumont Hospital) - Congenital mesoblastic nephroma
Minnesota (Fairview Ridges Hospital) - Congenital mesoblastic nephroma
Nebraska (Creighton University Medical Center) - Congenital mesoblastic nephroma, mixed
Ohio (Cleveland Clinic Pathology Residents) - Congenital mesoblastic nephroma
Ohio (University of Toledo Medical Center Residents) - Congenital mesoblastic nephroma
Pennsylvania (College of Medicine) - Cellular congenital mesoblastic nephroma

Pennsylvania (Lehigh Valley Hospital) - Mesoblastic nephroma
Puerto Rico (University of Puerto Rico) - Congenital mesoblastic nephroma
San Diego (Naval Medical Center) - Congenital mesoblastic nephroma, classic type
South Dakota (University of South Dakota Armed Forces) - Mature cystic teratoma
Texas (Crystal Beach) - Mesoblastic nephroma
Texas, Lubbock - Leiomyosarcoma
Wisconsin, Milwaukee - Congenital mesoblastic nephroma
Canada (Pasqua Hospital) - Congenital mesoblastic nephroma
India (Sri Siddhartha Medical College) - Congenital mesoblastic nephroma
Ireland (Bon Secours Hospital) - Congenital (infantile) fibrosarcoma
Ireland (Kerry General Hospital) - Mesoblastic nephroma
Ireland (Mayo General Hospital) - Cellular mesoblastic nephroma
Japan, Tokyo - Congenital mesoblastic nephroma
Japan (University of Yamanashi) - Congenital mesoblastoma
Japan (Wakayama Medical University) - Congenital mesoblastic nephroma, cellular type
Oman (Khoulia Hospital) - Congenital mesoblastic nephroma
Spain (Hospital Xeral) - Congenital mesoblastic nephroma (classic type)

Case 8 - Diagnosis:

Congenital mesoblastic nephroma (classic type)

Case 8 - References:

Pathologic quiz case: renal mass in a 3-week-old infant. Congenital mesoblastic nephroma, mixed type. *Arch Pathol Lab Med* 2004; Aug;128(8): p929-3. Munivenkatappa RB; Sun CC.
 Prenatal diagnosis of congenital mesoblastic nephroma associated with renal hypertension in a premature child. *J Urol* 2005; Mar;173(3): p983. Canning DA.
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 Cytodiagnosis of congenital mesoblastic nephroma: a case report.. *Diagn Cytopathol* 2013; Mar;41(3): p234-8. Kulkarni MP; Gosavi AV, et al.
 Cellular mesoblastic nephroma in an infant: report of the cytologic diagnosis of a rare paediatric renal tumor. *Diagn Cytopathol* 2009; May;37(5): p377-80. Gupta R; Mathur SR, et al.
 Mesoblastic nephroma: a report of the United Kingdom Children's Cancer and Leukaemia Group (CCLG). *Pediatr Blood Cancer* 2011; May;56(5): p744-8. England RJ; Haider, et al.

Case No. 9, Accession No. 31914

September 2014

Alameda (Alameda County Medical Center) - Invasive squamous cell carcinoma
Fontana (Kaiser Foundation Hospital) - Squamous cell carcinoma
Hayward Fremont (St. Rose Hospital) - Squamous carcinoma
Long Beach (Long Beach Veterans Hospital) - Poorly differentiated keratinizing squamous cell carcinoma
San Francisco (San Francisco General Hospital) - Squamous cell carcinoma
Woodland Hills (Kaiser Permanente) - Invasive squamous cell carcinoma
Arkansas (Associated Pathologist Laboratory) - Squamous cell carcinoma
Colorado (Fort Collins) - Invasive squamous cell carcinoma
Florida (Atlantic University) - Squamous cell carcinoma of the penis
Florida (GastroEnterology Associates of Ocala) - Squamous cell carcinoma
Georgia, Atlanta - Squamous cell carcinoma
Georgia (Wellstar Healthcare System) - Squamous cell carcinoma (4)
Illinois (Heartland Regional Medical Center) - Squamous cell carcinoma
Illinois, Oak Brook - Invasive squamous cell carcinoma
Iowa (Allen Memorial Hospital) - Invasive, keratinizing squamous cell carcinoma
Maryland (University of Maryland Medical Center) - Keratinizing squamous cell carcinoma
Michigan (William Beaumont Hospital) - Mixed carcinoma
Minnesota (Fairview Ridges Hospital) - Squamous cell carcinoma

Nebraska (Creighton University Medical Center) - Invasive squamous cell carcinoma
Ohio (Cleveland Clinic Pathology Residents) - Invasive keratinizing squamous cell carcinoma
Ohio (University of Toledo Medical Center Residents) - Squamous cell carcinoma
Pennsylvania (College of Medicine) - Keratinizing squamous cell carcinoma
Pennsylvania (Lehigh Valley Hospital) - Squamous cell carcinoma
Puerto Rico (University of Puerto Rico) - Squamous cell carcinoma, well differentiated keratinizing
San Diego (Naval Medical Center) - Squamous cell carcinoma
South Dakota (University of South Dakota Armed Forces) - Squamous cell carcinoma
Texas (Crystal Beach) - Squamous cell carcinoma
Texas, Lubbock - Squamous cell carcinoma
Wisconsin, Milwaukee - Keratinizing squamous cell carcinoma
Canada (Pasqua Hospital) - Squamous cell carcinoma
India (Sri Siddhartha Medical College) - Squamous cell carcinoma
Ireland (Bon Secours Hospital) - Squamous cell carcinoma
Ireland (Kerry General Hospital) - Squamous carcinoma
Ireland (Mayo General Hospital) - Infiltrating squamous cell carcinoma
Japan, Tokyo - Squamous cell carcinoma
Japan (University of Yamanashi) - Squamous cell carcinoma
Japan (Wakayama Medical University) - Squamous cell carcinoma
Oman (Khoulia Hospital) - Squamous cell carcinoma
Spain (Hospital Xeral) - Squamous cell carcinoma

Case 9 - Diagnosis:

Invasive squamous cell carcinoma, penis

Case 9 - References:

Distribution and characterization of subtypes of penile intraepithelial neoplasia and their association with invasive carcinomas: a pathological study of 139 lesions in 121 patients. *Hum Pathol* 2012; Jul;43(7): p1020-7. Chaux A; Velazquez EE, et al.
 Immunohistochemical profile of the penile urethra and differential expression of GATA3 in urothelial versus squamous cell carcinomas of the penile urethra. *Hum Pathol* 2013; Dec;44(12): p2760-7. Chaux A; Han JS, et al.
 Squamous cell carcinoma at the site of a Prince Albert's piercing. *J Sex Med* 2010; Jun;7(6): p2280-3. Edlin RS; Aaronson DS, et al.
 Cytopathological features of warty (condylomatous) carcinoma of the penis: a case report and distinction from other verruciform penile tumors. *Diagn Cytopathol* 2010; Nov;38(11): p841-5. Hayashi T; Haba R, et al.
 Papillary squamous cell carcinoma, not otherwise specified (NOS) of the penis: clinicopathologic features, differential diagnosis, and outcome of 35 cases. *Am J Surg Pathol* 2010; Feb;34(2): p223-30. Chaux A; Soares F, et al.

Case No. 10, Accession No. 31015

September 2014

Alameda (Alameda County Medical Center) - Embryonal rhabdomyosarcoma
Fontana (Kaiser Foundation Hospital) - Embryonal rhabdomyosarcoma
Hayward Fremont (St. Rose Hospital) - Rhabdomyosarcoma
Long Beach (Long Beach Veterans Hospital) - Rhabdomyosarcoma
San Francisco (San Francisco General Hospital) - Rhabdomyosarcoma
Woodland Hills (Kaiser Permanente) - Rhabdomyosarcoma
Arkansas (Associated Pathologist Laboratory) - Paratesticular rhabdomyosarcoma, spindle cell type
Colorado (Fort Collins) - Rhabdomyosarcoma
Florida (Atlantic University) - Embryonal rhabdomyosarcoma with a well differentiated pattern
Florida (GastroEnterology Associates of Ocala) - Rhabdomyosarcoma, embryonal
Georgia, Atlanta - Rhabdomyosarcoma
Georgia (Wellstar Healthcare System) - Rhabdoid tumor or rhabdomyosarcoma (1); Embryonal rhabdomyosarcoma (1); Rhabdomyosarcoma (1); Leydig cell tumor (1)
Illinois (Heartland Regional Medical Center) - Rhabdomyosarcoma, embryonal
Illinois, Oak Brook - Embryonal rhabdomyosarcoma

Iowa (Allen Memorial Hospital) - Leydig cell tumor
Maryland (University of Maryland Medical Center) - Rhabdomyosarcoma
Michigan (William Beaumont Hospital) - Embryonal rhabdomyosarcoma
Minnesota (Fairview Ridges Hospital) - Rhabdomyosarcoma
Nebraska (Creighton University Medical Center) - Rhabdomyosarcoma, embryonal
Ohio (Cleveland Clinic Pathology Residents) - Rhabdomyosarcoma
Ohio (University of Toledo Medical Center Residents) - Rhabdomyosarcoma
Pennsylvania (College of Medicine) - Embryonal rhabdomyosarcoma
Pennsylvania (Lehigh Valley Hospital) - Embryonal rhabdomyosarcoma
Puerto Rico (University of Puerto Rico) - Embryonal rhabdomyosarcoma
San Diego (Naval Medical Center) - Rhabdomyosarcoma
South Dakota (University of South Dakota) - Rhabdomyosarcoma
Texas (Crystal Beach) - Rhabdomyosarcoma, in teratoma
Texas, Lubbock - Rhabdomyosarcoma
Wisconsin, Milwaukee - Rhabdomyosarcoma
Canada (Pasqua Hospital) - Rhabdomyosarcoma
India (Sri Siddhartha Medical College) - Embryonal rhabdomyosarcoma
Ireland (Bon Secours Hospital) - Pleomorphic rhabdomyosarcoma
Ireland (Kerry General Hospital) - Paratesticular embryonal rhabdomyosarcoma
Ireland (Mayo General Hospital) - Embryonal rhabdomyosarcoma
Japan, Tokyo - Rhabdomyosarcoma
Japan (University of Yamanashi) - Rhabdomyosarcoma
Japan (Wakayama Medical University) - Embryonal rhabdomyosarcoma
Oman (Khoula Hospital) - Rhabdomyosarcoma
Spain (Hospital Xeral) - Embryonal rhabdomyosarcoma

Case 10 - Diagnosis:

Paratesticular embryonal rhabdomyosarcoma

Case 10 - References:

Testicular and paratesticular tumours in the prepubertal population. *Lancet Oncol* 2010; May;11(5): p476-83. Ahmed HU; Arya M, et al.
 Testicular and paratesticular pathology in the pediatric population: a 20 year experience at Riley hospital for children. *Pathol Res Pract* 2013; Jul;209(7): p404-8. Fan R; Zhang J, et al.
 Staging paratesticular rhabdomyosarcoma in the "as low as reasonably achievable" age: the case for PET-CT. *Urology* 2013; Jul;82(1): p220-3. Burnette JO; Klaassen Z, et al.
 A rare case of paratesticular embryonal rhabdomyosarcoma diagnosed by fine needle aspiration: a case report. *Acta Cytol* 2009; May-Jun;53(3): p319-22. Valeri RM; Papanikolaou A, et al.
 Paratesticular rhabdomyosarcoma. *J Urol* 2009; Oct;182(4): p1578-9. Reeves HM; MacLennan GT.
 Spindle cell rhabdomyosarcoma: a brief diagnostic review and differential diagnosis. *Arch Pathol Lab Med* 2013; Aug;137(8): p1155-8. Carroll SJ; Nodit L.