



CALIFORNIA
TUMOR TISSUE REGISTRY

GENITOURINARY PATHOLOGY

Minutes – Subscription B

February 2013



SUGGESTED READING (General Topics from Recent Literature):

- Lobo AZC, Tanabe KK, et al. The distribution of microscopic melanoma metastases in sentinel lymph nodes. Implications for pathology protocols. *Am J Surg Pathol* 2012; 36:1841-1848.
- Shah AA, Frierson HF J. and Cathro HP. Analysis of immunohistochemical stain usage in different pathology practice settings. *Am J Clin Pathol* 2012; 13:831-836.
- Ordonez NG. Application of immunohistochemistry in the diagnosis of epithelioid mesothelioma. A review and update. *Hum Pathol* 2013; 44:1-19.
- Yamamoto-Ibusuki M, Yamamoto Y, et al. Comparison of prognostic values between combined immunohistochemical score of estrogen receptor, progesterone receptor, human epidermal growth factor receptor 2, Ki67 and the corresponding gene expression score in breast cancer. *Mod Pathol* 2013; 26:79-86.
- Mason A and Wititsuwannakul J. Expression of p16 alone does not differentiate between spitz nevi and spitzoid melanoma. *J Cutan Pathol* 2012; 39:1062-1074.

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FILE DIAGNOSES

CTTR Subscription B

February 2013

Case 1:

Wilms tumor (nephroblastoma), blastemal predominant, kidney
T-71000, M-89603

Case 2:

Mucinous tubular and spindle cell carcinoma, kidney
T-71000, M-80323

Case 3:

Papillary renal cell carcinoma, kidney
T-71000, M-80503

Case 4:

Fibromatosis, ureter
T-75000, M-76100

Case 5:

Urothelial carcinoma with glandular features, ureter
T-75000, M-81203

Case 6:

Papillary urothelial carcinoma, ureter
T-75000, M-81203

Case 7:

Malignant mixed germ cell tumor (teratocarcinoma), testis
T-78000, M-90813

Case 8:

Testicular tumor of adrenogenital syndrome
T-78000, D-2306

Case 9:

Adenomatoid tumor, testis
T-78000, M-90540

Case 10:

Leydig cell tumor, testis
T-78000, M-86501

Glendale - Wilms tumor
Newport Beach - Wilms tumor
Orange (UCI Resident's Medical Center) - Neuroblastoma
Orinda (Kaiser Permanente) - Nephroblastoma (Wilms)
Alabama (Cunningham Pathology) - Nephroblastoma
Delaware (Armed Forces Medical Examiner System) - Monophasic Wilms tumor
Georgia, Atlanta - Nephroblastoma (Wilms tumor)
Illinois (Heartland Regional Medical Center) - Nephroblastoma
Maryland (University of Maryland Medical Center) - Small round blue cell tumor/PNET vs. nephroblastoma
New York (SUNY Downstate Medical Center) - Blastema predominant Wilms tumor
Ohio (Summa Health System) - Wilms tumor
Tennessee, Knoxville - PNET vs. Wilms tumor
Texas, Crystal Beach - PNET (primitive neuroectodermal tumor)
Texas, Lubbock - Ganglioneuroblastoma
Wisconsin (Medical College of Wisconsin) - Wilms tumor, favorable histology
Canada (Pasqua Hospital) - Wilms tumor
Canada (Sherbrooke University) - Nephroblastoma, kidney
Ireland (Connelly Hospital) - Ganglioneuroblastoma
Ireland (Galway Residents) - Nephroblastoma
Japan (Asahi General Hospital) - Nephroblastoma (2)
Saudi Arabia (King Fahad Hospital Hofuf) - Wilms tumor
Saudi Arabia (King Khalid University Hospital) - Nephroblastoma

Case 1 - Diagnosis:

Wilms tumor (nephroblastoma), blastemal predominant, kidney
T-71000, M-89603

Case 1 - References:

Cytogenetic findings in Wilms' tumour: a single institute study. *Pathology* 2010; Dec;42(7): p643-9. Md Zin R; Murch A; Charles A.
The pathology of Wilms' tumour (nephroblastoma): the International Society of Paediatric Oncology approach. *J Clin Pathol* 2010; Feb;63(2): p102-9. Vujanic GM; Sandstedt B.
Bilateral Wilms' tumors: single-center experience with 22 cases and literature review. *Urology* 2010; Oct;76(4): p946-51. Sarhan OM; El-Baz M, et al.
Histoclinical study of nephroblastoma in relation to current and previous SIOP Classification of Renal Tumors of Childhood. *Pol J Pathol* 2010;;61(4): p234-9. Taran K; Sitkiewicz A; Kobos J.
The non-neoplastic kidney in tumor nephrectomy specimens: what can it show and what is important? *Adv Anat Pathol* 2010; Jul;17(4): p235-50 Bonsib SM; Pei Y.

Glendale - Mucinous tubular and spindle cell carcinoma
Newport Beach - Mesonephric adenoma
Orange (UCI Resident's Medical Center) - Mucinous tubular and spindle cell carcinoma
Orinda (Kaiser Permanente) - Mucinous tubular and spindle cell carcinoma
Alabama (Cunningham Pathology) - Renal cell carcinoma, collecting duct type
Delaware (Armed Forces Medical Examiner System) - Renal cortical adenoma
Georgia, Atlanta - Mucinous tubular and spindle cell carcinoma
Illinois (Heartland Regional Medical Center) - Renal cell carcinoma, low grade, NOS
Maryland (University of Maryland Medical Center) - Mucinous tubular and spindle cell carcinoma
New York (SUNY Downstate Medical Center) - Mucinous tubular and spindle cell carcinoma
Ohio (Summa Health System) - Mucinous tubular and spindle cell carcinoma

Tennessee, Knoxville - Mucinous tubular and spindle cell carcinoma
Texas, Crystal Beach - Renal cell carcinoma, collecting duct
Texas, Lubbock - Sarcomatoid renal cell carcinoma
Wisconsin (Medical College of Wisconsin) - Mucinous tubular spindle renal carcinoma
Canada (Pasqua Hospital) - Mucinous and spindle cell carcinoma
Canada (Sherbrooke University) - Papillary carcinoma, kidney
Ireland (Connelly Hospital) - Clear cell carcinoma
Ireland (Galway Residents) - Papillary renal cell carcinoma
Japan (Asahi General Hospital) - Mucinous tubular and spindle cell carcinoma (1); Renal cell carcinoma, sarcomatoid (1)
Saudi Arabia (King Fahad Hospital Hofuf) - Mucinous tubular and spindle carcinoma
Saudi Arabia (King Khalid University Hospital) - Mucinous tubular and spindle cell carcinoma

Case 2 - Diagnosis:

Mucinous tubular and spindle cell carcinoma, kidney
 T-71000, M-80323

Case 2 - References:

Fine needle aspiration biopsy of renal mucinous tubular and spindle cell carcinoma: report of two cases. *Diagn Cytopathol* 2010; Jan;38(1): p51-5. Marks-Jones DA; Zynger DL, et al.
 Mucinous tubular and spindle cell carcinoma of the kidney. *J Urol* 2010; Feb;183(2): p738-9. Yang G; Breyer BN, et al.
 Solid variant of papillary renal cell carcinoma with spindle cell and tubular components. *Arch Pathol Lab Med* 2010; Aug;134(8): p1210-4. Cantley R; Gattuso P; Cimbaluk D.
 Expanding the histologic spectrum of mucinous tubular and spindle cell carcinoma of the kidney. *Am J Surg Pathol* 2006; Dec;30(12): p1554-60. Fine SW; Argani P, et al.
 Cytologic aspect of mucinous tubular and spindle-cell renal carcinoma in fine-needle aspirates. *Diagn Cytopathol* 2006; Sep;34(9): p660-2. Ortega JA; Solano JG, et al.
 Tubulocystic carcinoma, mucinous tubular and spindle cell carcinoma, and other recently described rare renal tumors. *Clin Lab Med* 2005; Jun;25(2): p393-416. MacLennan GT; Bostwick DG.
 Review of mucinous tubular and spindle-cell carcinoma of the kidney with a focus on clinical and pathobiological aspects. *Histol Histopathol* 2005; Jan;20(1): p221-4. Kuroda N; Toi M, et al.

Case No. 3, Accession No. 31517

February 2013

Glendale - Solid papillary renal cell carcinoma
Newport Beach - Papillary renal cell carcinoma
Orange (UCI Resident's Medical Center) - Metanephric adenoma
Orinda (Kaiser Permanente) - Papillary renal cell carcinoma
Alabama (Cunningham Pathology) - Renal cortical adenoma
Delaware (Armed Forces Medical Examiner System) - Metanephric adenoma
Georgia, Atlanta - Papillary renal cell carcinoma
Illinois (Heartland Regional Medical Center) - Renal cell carcinoma, papillary
Maryland (University of Maryland Medical Center) - Metanephric adenoma
New York (SUNY Downstate Medical Center) - Papillary renal cell carcinoma
Ohio (Summa Health System) - Papillary carcinoma, type 1
Tennessee, Knoxville - Metanephric adenoma
Texas, Crystal Beach - Renal adenoma
Texas, Lubbock - Papillary renal cell carcinoma
Wisconsin (Medical College of Wisconsin) - Metanephric adenoma
Canada (Pasqua Hospital) - Papillary carcinoma with focal glomeruloid pattern
Canada (Sherbrooke University) - Metanephric adenoma, kidney
Ireland (Connelly Hospital) - Metanephric adenoma
Ireland (Galway Residents) - Papillary renal cell carcinoma
Japan (Asahi General Hospital) - Metanephric adenoma (2)
Saudi Arabia (King Fahad Hospital Hofuf) - Papillary renal cell carcinoma

Saudi Arabia (King Khalid University Hospital) - Papillary renal cell carcinoma, type II

Case 3 - Diagnosis:

Papillary renal cell carcinoma, kidney
T-71000, M-80503

Case 3 - References:

Papillary renal cell carcinoma: a clinicopathological study of 35 cases. *Int J Urol* 2006; Aug;13(8): p1049-52. Yamanaka K; Miyake H, et al.
Renal tubulocystic carcinoma is closely related to papillary renal cell carcinoma: implications for pathologic classification. *Am J Surg Pathol* 2009; Dec;33(12): p1840-9. Zhou M; Yang XJ, et al.
Differential diagnosis of renal tumors with papillary architecture. *Adv Anat Pathol* 2011; Mar;18(2): p120-32. Tickoo SK; Reuter VE.
Solid variant of papillary renal cell carcinoma with spindle cell and tubular components. *Arch Pathol Lab Med* 2010; Aug;134(8): p1210-4. Cantley R; Gattuso P; Cimbalk D.
Renal cell carcinoma with extensive clear cell change sharing characteristics of mucinous tubular and spindle cell carcinoma and papillary renal cell carcinoma. *Pathol Int* 2009; Sep;59(9): p687-8. Kuroda N; Tamura M; Hes O, et al.
Immunohistochemical analysis of mucinous tubular and spindle cell carcinoma and papillary renal cell carcinoma of the kidney: significant immunophenotypic overlap warrants diagnostic caution. *Am J Surg Pathol* 2006; Jan;30(1): p13-9. Paner GP; Srigley JR, et al.

Case No. 4, Accession No. 26358

February 2013

Glendale - Deep fibromatosis
Newport Beach - Desmoid
Orange (UCI Resident's Medical Center) - Fibromatosis
Orinda (Kaiser Permanente) - Fibromatosis
Alabama (Cunningham Pathology) - UPJ obstr abnl fibrosis
Delaware (Armed Forces Medical Examiner System) - Inflammatory pseudotumor
Georgia, Atlanta - Fibromatosis
Illinois (Heartland Regional Medical Center) - Fibromatosis
Maryland (University of Maryland Medical Center) - Desmoid fibromatosis
New York (SUNY Downstate Medical Center) - Fibromatosis
Ohio (Summa Health System) - Post op spindle cell nodule
Tennessee, Knoxville - Fibromatosis
Texas, Crystal Beach - Retroperitoneal fibrosis
Texas, Lubbock - Desmoid tumor
Wisconsin (Medical College of Wisconsin) - Fibromatosis
Canada (Pasqua Hospital) - Fibromatosis
Canada (Sherbrooke University) - Deep fibromatosis, ureter
Ireland (Connelly Hospital) - Angiomyolipoma
Ireland (Galway Residents) - Fibromatosis
Japan (Asahi General Hospital) - Fibromatosis (1); Solitary fibrous tumor (1)
Saudi Arabia (King Fahad Hospital Hofuf) - Fibromatosis
Saudi Arabia (King Khalid University Hospital) - Retroperitoneal fibrosis

Case 4 - Diagnosis:

Fibromatosis, ureter
T-75000, M-76100

Outside Consultation: AFIP; Robert F. Karnei, Jr., M.D.; "Probable Fibromatosis."

Case 4 - References:

Incidences of kidney, pelvis, ureter, and bladder cancer in a nationwide, population-based cancer registry, Denmark, 1944-2003. *Urology* 2010; May;75(5): p1222-7. Wihlborg A; Johansen C.
 Prognostic factors in desmoid-type fibromatosis: a clinicopathological and immunohistochemical analysis of 46 cases. *Pathology* 2010; Feb;42(2): p147-50. Huang PW; Tzen CY.
 Immunohistochemistry for beta-catenin in the differential diagnosis of spindle cell lesions: analysis of a series and review of the literature. *Histopathology* 2007; Oct;51(4): p509-14. Carlson JW; Fletcher CD.
 Resolution of hydronephrosis due to massive mesenteric fibromatosis using cyclo-oxygenase 2 inhibitors. *Urology* 2007; Sep;70(3): p591.e3-4. Ng TY; Yang MD, et al.

Case No. 5, Accession No. 25194

February 2013

Glendale - Adenocarcinoma
Newport Beach - Papillary transitional cell carcinoma
Orange (UCI Resident's Medical Center) - Metastatic adenocarcinoma
Orinda (Kaiser Permanente) - Adenocarcinoma, non-invasive
Alabama (Cunningham Pathology) - Adenocarcinoma
Delaware (Armed Forces Medical Examiner System) - Adenocarcinoma
Georgia, Atlanta - Adenocarcinoma, rule out metastasis
Illinois (Heartland Regional Medical Center) - Adenocarcinoma
Maryland (University of Maryland Medical Center) - Metastatic adenosquamous carcinoma
New York (SUNY Downstate Medical Center) - Adenocarcinoma
Ohio (Summa Health System) - High grade papillary transitional carcinoma
Tennessee, Knoxville - Adenocarcinoma
Texas, Crystal Beach - Adenocarcinoma, ureter
Texas, Lubbock - Metastatic adenocarcinoma
Wisconsin (Medical College of Wisconsin) - Metastatic cervical adenocarcinoma
Canada (Pasqua Hospital) - Recurrent cervical carcinoma
Canada (Sherbrooke University) - Adenocarcinoma, ureter
Ireland (Connelly Hospital) - Adenocarcinoma
Ireland (Galway Residents) - Non-invasive papillary urothelial carcinoma
Japan (Asahi General Hospital) - Adenocarcinoma (1); Urothelial carcinoma (1)
Saudi Arabia (King Fahad Hospital Hofuf) - Metastatic adenocarcinoma
Saudi Arabia (King Khalid University Hospital) - Adenocarcinoma

Case 5 - Diagnosis:

Urothelial carcinoma with glandular features, ureter
 T-75000, M-81203

Outside Consultation: USC Medical Center, Los Angeles; C.P. Schwinn, M.D., "Papillary Adenocarcinoma, Low Grade.

Case 5 - References:

Urothelial carcinoma in an ectopic ureter. *Urology* 2010; Jan;75(1): p69-70 Hanafusa T; Takayama H, et al.
 The molecular signature for urothelial carcinoma of the upper urinary tract. *J Urol* 2008; Mar;179(3): p1155-9. Ho CL; Tzai TS; Chen JC, et al.
 Significance of denuded urothelium in papillary urothelial lesions. *Am J Surg Pathol* 2007; Feb;31(2): p298-303. Owens CL; Epstein JI.
 Urothelial carcinoma "nested variant" of renal pelvis and ureter. *Urology* 2007; Apr;69(4): p778.e15-7. Pustaszzeri M; Hauser J, et al.
 [Transitional carcinoma of the ureter with osseous metaplasia of the stroma: a case report]. *Ann Pathol* 2007; Feb;27(1): p43-6. Mege-Lechevallier F; Cherasse A, et al.
 Papillary urothelial carcinoma in sigmoid neobladder suggesting 'intraluminal seeding' from ureter cancer. *Int J Urol* 2008; Oct;15(10): p948. Kawamorita N.

Glendale - Low grade papillary urothelial carcinoma
Newport Beach - Papillary transitional cell carcinoma
Orange (UCI Resident's Medical Center) - Papillary urothelial carcinoma, low grade
Orinda (Kaiser Permanente) - Low grade papillary urothelial carcinoma
Alabama (Cunningham Pathology) - Transitional cell carcinoma
Delaware (Armed Forces Medical Examiner System) - Papillary urothelial neoplasm of low malignant potential
Georgia, Atlanta - Papillary urothelial carcinoma
Illinois (Heartland Regional Medical Center) - Papillary urothelial carcinoma, low grade
Maryland (University of Maryland Medical Center) - Low grade papillary urothelial carcinoma, invasive
New York (SUNY Downstate Medical Center) - Low grade urothelial cell carcinoma
Ohio (Summa Health System) - Low grade papillary transitional cell features
Tennessee, Knoxville - Papillary urothelial carcinoma
Texas, Crystal Beach - Papillary transitional cell carcinoma
Texas, Lubbock - High grade urothelial carcinoma with invasion of lamina propria
Wisconsin (Medical College of Wisconsin) - Low grade papillary urothelial carcinoma
Canada (Pasqua Hospital) - Papillary urothelial carcinoma, low grade
Canada (Sherbrooke University) - Papillary urothelial carcinoma of low grade, ureter
Ireland (Connelly Hospital) - Non invasive low grade papillary carcinoma
Ireland (Galway Residents) - Invasive papillary urothelial carcinoma
Japan (Asahi General Hospital) - Inverted papilloma (1); Urothelial carcinoma (1)
Saudi Arabia (King Fahad Hospital Hofuf) - Low grade papillary urothelial carcinoma
Saudi Arabia (King Khalid University Hospital) - Low grade papillary urothelial carcinoma

Case 6 - Diagnosis:

Papillary urothelial carcinoma, ureter
T-75000, M-81203

Case 6 - References:

Urothelial carcinoma in an ectopic ureter. *Urology* 2010; Jan;75(1): p69-70. Hanafusa T; Takayama H, et al.
Micropapillary variant of urothelial carcinoma in the upper urinary tract: a clinicopathologic study of 11 cases. *Arch Pathol Lab Med* 2009; Jan;133(1): p62-6. Guo CC; Tamboli P; Czerniak B.
Significance of denuded urothelium in papillary urothelial lesions. *Am J Surg Pathol* 2007; Feb;31(2): p298-303. Owens CL; Epstein JI.
Urothelial carcinoma "nested variant" of renal pelvis and ureter. *Urology* 2007; Apr;69(4): p778.e15-7. Puzstaszeri M; Hauser J, et al.
Papillary urothelial hyperplasia: relationship to urothelial neoplasms. *Pathology* 2010; Jun;42(4): p360-3. Readal N; Epstein JI.
Behavior of urothelial carcinoma with respect to anatomical location. *J Urol* 2007; May;177(5): p1715-20. Catto JW; Yates DR, et al.

Glendale - Mixed immature teratoma, yolk sac tumor and seminoma
Newport Beach - Teratoma
Orange (UCI Resident's Medical Center) - Mixed germ cell tumor, minor component of embryonal carcinoma, major component teratoma
Orinda (Kaiser Permanente) - Mixed germ cell tumor with teratoma
Alabama (Cunningham Pathology) - Teratocarcinoma (MMGCT)
Delaware (Armed Forces Medical Examiner System) - Malignant mixed germ cell tumor
Georgia, Atlanta - Mixed germ cell tumor (teratoma, embryonal carcinoma, yolk sac tumor)
Illinois (Heartland Regional Medical Center) - Malignant germ cell neoplasm, predominantly teratoma
Maryland (University of Maryland Medical Center) - Mixed germ cell tumor

New York (SUNY Downstate Medical Center) - Mixed germ cell tumor with teratoma neoplasm and embryonal carcinoma
Ohio (Summa Health System) - Mixed germ cell tumor (teratoma) syncytiotrophoblastic component
Tennessee, Knoxville - Mixed germ cell tumor
Texas, Crystal Beach - Teratoma immature
Texas, Lubbock - Mixed germ cell tumor with teratoma, embryonal carcinoma, yolk sac tumor and seminoma
Wisconsin (Medical College of Wisconsin) - Mixed germ cell tumor with seminoma teratoma
Canada (Pasqua Hospital) - Mixed germ cell tumor, mainly teratoma
Canada (Sherbrooke University) - Mixed germ cell tumor (teratocarcinoma), testicle
Ireland (Connelly Hospital) - Immature teratoma
Ireland (Galway Residents) - Mixed germ cell tumor (teratoma and minor seminoma component)
Japan (Asahi General Hospital) - Teratoma (1) Immature teratoma with embryonal carcinoma (1)
Saudi Arabia (King Fahad Hospital Hofuf) - Mixed germ cell tumor with immature embryonal carcinoma component
Saudi Arabia (King Khalid University Hospital) - Malignant mixed germ cell tumor of testis

Case 7 - Diagnosis:

Malignant mixed germ cell tumor (Teratocarcinoma), testicle
T-78000, M-90813

Case 7 - References:

Metastatic epithelioid trophoblastic tumor in a male patient with mixed germ-cell tumor of the testis. *Am J Surg Pathol* 2009; Dec;33(12): p1902-5. Allan RW; Algood CB; Shih Ie M.
Multifocality in testicular germ cell tumors. *J Urol* 2009; Mar;181(3): p1114-9; discussion 1119-20. Ehrlich Y; Konichezky M, et al.
Association of intratubular seminoma and intratubular embryonal carcinoma with invasive testicular germ cell tumors. *Am J Surg Pathol* 2007; Jul;31(7): p1045-9. Lau SK; Weiss LM; Chu PG.
Testicular tumors--some new and a few perennial problems. *Arch Pathol Lab Med* 2008; Apr;132(4): p548-64. Young RH.
ITGCN of the testis, contralateral testicular biopsy and bilateral testicular cancer. *Urol Clin North Am* 2007; May;34(2): p119-25; abstract vii. Karellas ME; Damjanov I; Holzbeierlein JM.
Testicular microlithiasis heralding mixed germ cell tumor of the testis in a boy. *J Endocrinol Invest* 2006; Jan;29(1): p82-5. Arrigo T; Messina MF, et al.
Gonadal teratomas: a review and speculation. *Adv Anat Pathol* 2004; Jan;11(1): p10-23. Ulbright TM.
Histology in mixed germ cell tumors. Is there a favorite pairing? *J Urol* 2004; Apr;171(4): p1471-3. Mosharafa AA; Foster RS, et al.

Case No. 8, Accession No. 31504

February 2013

Glendale - Leydig cell tumor
Newport Beach - Leydig cell tumor
Orange (UCI Resident's Medical Center) - Leydig cell tumor
Orinda (Kaiser Permanente) - Testicular tumor of adrenogenital syndrome
Alabama (Cunningham Pathology) - Ectopic ad cortex/adenoma
Delaware (Armed Forces Medical Examiner System) - Leydig cell tumor
Georgia, Atlanta - Leydig cell hyperplasia of adrenogenital syndrome
Illinois (Heartland Regional Medical Center) - Leydig cell hyperplasia
Maryland (University of Maryland Medical Center) - Adrenal testicular tumor
New York (SUNY Downstate Medical Center) - Testicular tumor of adrenogenital syndrome
Ohio (Summa Health System) - Testicular "tumor" of adrenogenital syndrome
Tennessee, Knoxville - Leydig cell tumor
Texas, Crystal Beach - Congenital adrenal hyperplasia ectopic
Texas, Lubbock - Leydig cell tumor
Wisconsin (Medical College of Wisconsin) - Testicular tumor of adrenogenital syndrome
Canada (Pasqua Hospital) - Leydig cell tumor

Canada (Sherbrooke University) - Leydig cell tumor, testis
Ireland (Connelly Hospital) - Leydig cell tumor
Ireland (Galway Residents) - Leydig cell tumor
Japan (Asahi General Hospital) - Leydig cell hyperplasia (1); Adrenal carcinoma (1)
Saudi Arabia (King Fahad Hospital Hofuf) - Testicular tumor of adrenogenital syndrome
Saudi Arabia (King Khalid University Hospital) - Tumor of adrenogenital syndrome

Case 8 - Diagnosis:

Testicular tumor of adrenogenital syndrome, testis
T-78000, D-2306

Case 8 - References:

Clinical and pathological features associated with the testicular tumor of the adrenogenital syndrome. *J Urol* 2007; Feb;177(2): p546-9; discussion 549. Ashley RA; McGee SM, et al.
Histopathological and immunophenotypic features of testicular tumour of the adrenogenital syndrome. *Histopathology* 2011; Jun;58(7): p1013-8. Wang Z; Yang S, et al.
Leydig cell tumor and hyperplasia: a review. *Anal Quant Cytol Histol* 2007; Jun;29(3): p139-47. Colecchia M; Nistal M, et al.
An in-depth look at Leydig cell tumor of the testis. *Arch Pathol Lab Med* 2007; Feb;131(2): p311-7. Al-Agha OM; Axiotis CA.

Case No. 9, Accession No. 13109

February 2013

Glendale - Adenomatoid tumor
Newport Beach - Endodermal sinus tumor
Orange (UCI Resident's Medical Center) - Adenomatoid tumor
Orinda (Kaiser Permanente) - Adenomatoid tumor
Alabama (Cunningham Pathology) - Non-sem germ cell tumor
Delaware (Armed Forces Medical Examiner System) - Adenomatoid tumor
Georgia, Atlanta - Adenomatoid tumor
Illinois (Heartland Regional Medical Center) - Sertoli-Leydig tumor
Maryland (University of Maryland Medical Center) - Angiosarcoma
New York (SUNY Downstate Medical Center) - Adenomatoid tumor
Ohio (Summa Health System) - Benign vascular tumor
Tennessee, Knoxville - Yolk sac tumor
Texas, Crystal Beach - Adenomatoid tumor
Texas, Lubbock - Hemangiopericytoma
Wisconsin (Medical College of Wisconsin) - Adenomatoid tumor
Canada (Pasqua Hospital) - Adenomatoid tumor/Leydig cell hyperplasia
Canada (Sherbrooke University) - Adenomatoid tumor and infarction testis
Ireland (Connelly Hospital) - Hemangioma
Ireland (Galway Residents) - Sertoli cell tumor
Japan (Asahi General Hospital) - Hemangioma (1); Varicocele (1)
Saudi Arabia (King Fahad Hospital Hofuf) - Differential of adenomatoid tumor and sertoli cell tumor
Saudi Arabia (King Khalid University Hospital) - Adenomatoid tumor of testis

Case 9 - Diagnosis:

Adenomatoid tumor, testis
T-78000, M-90540

Director's Note: Subsequent staining showed positivity for CAM 5.2, CK cocktail, and Calretinin. It was negative for EMA, CD31 and CD34. (drc)

Case 9 - References:

Adenomatoid tumor of tunica albuginea mimicking seminoma on fine needle aspiration cytology: a case report. *Acta Cytol* 2009; May-Jun;53(3): p349-52. Monappa V; Rao AC, et al.
Adenomatoid tumor of the testes. *Urology* 2004; Apr;63(4): p779-81. Williams SB; Han M, et al.
Rapidly growing adenomatoid tumor extending into testicular parenchyma mimics testicular carcinoma. *Urology* 2004; Sep;64(3): p589. Evans K.
Adenomatoid tumors of the female and male genital tracts express WT1. *Int J Gynecol Pathol* 2004; Apr;23(2): p123-8. Schwartz EJ; Longacre TA.
Paratesticular mesothelial proliferations. *Semin Diagn Pathol* 2003; Nov;20(4): p272-8. Churg A.
Fine needle aspiration cytology of adenomatoid tumour--a case report with review of literature. *Indian J Pathol Microbiol* 2005; Oct;48(4): p503-4. Manjunath GV; Nandini NM; Sunila.
Cytologic features of paratesticular adenomatoid tumor. *Acta Cytol* 2004; May-Jun;48(3): p457-8. Perez-Campos A; Jimenez-Heffernan JA, et al.
Thread-like bridging strands: a morphologic feature present in all adenomatoid tumors. *Ann Diagn Pathol* 2003; Oct;7(5): p273-7. Hes O; Perez-Montiel DM, et al.

Case No. 10, Accession No. 20197

February 2013

Glendale - Malignant leydig cell tumor
Newport Beach - Malakoplakia, benign
Orange (UCI Resident's Medical Center) - Malignant leydig cell tumor
Orinda (Kaiser Permanente) - Leydig cell tumor
Alabama (Cunningham Pathology) - Spermatocytic seminoma
Delaware (Armed Forces Medical Examiner System) - Spermatocytic seminoma
Georgia, Atlanta - Leydig cell tumor, rule out malignancy
Illinois (Heartland Regional Medical Center) - Leydig cell tumor
Maryland (University of Maryland Medical Center) - Leydig cell tumor
New York (SUNY Downstate Medical Center) - Leydig cell tumor, favor malignant
Ohio (Summa Health System) - Leydig cell tumor
Tennessee, Knoxville - Melanoma vs. sertoli cell tumor
Texas, Crystal Beach - Leydig cell tumor
Texas, Lubbock - Mesothelioma
Wisconsin (Medical College of Wisconsin) - Leydig cell tumor
Canada (Pasqua Hospital) - Leydig cell tumor
Canada (Sherbrooke University) - Sertoli leydig cell tumor, testis
Ireland (Connelly Hospital) - Leydig cell tumor
Ireland (Galway Residents) - Leydig cell tumor
Japan (Asahi General Hospital) - Leydig cell tumor (1); Mucinous carcinoma (1)
Saudi Arabia (King Fahad Hospital Hofuf) - Leydig cell tumor
Saudi Arabia (King Khalid University Hospital) - Leydig cell tumor

Case 10 - Diagnosis:

Leydig cell tumor, testis
T-78000, M-86501

Director's Note: In 1976 this tumor was called an "interstitial cell tumor." (drc)

Case 10 - References:

Cytologic identification of Reinke crystalloids in ovarian Leydig cell tumor. *Arch Pathol Lab Med* 2006; Jun;130(6): p765-6. Stewart C; Hammond I.
Leydig cell tumor in an elderly patient with complete androgen insensitivity syndrome. *Gynecol Oncol* 2005; Mar;96(3): p870-2. Iwamoto I; Yanazume S, et al.
Testicular Leydig cell tumor diagnosed on fine needle aspiration. *Diagn Cytopathol* 2010; Sep;38(9): p682-4. Handa U; Sood T; Punia RS.

Leydig cell tumor and hyperplasia: a review. *Anal Quant Cytol Histol* 2007; Jun;29(3): p139-47. Colecchia M; Nistal M, et al.
An in-depth look at Leydig cell tumor of the testis. *Arch Pathol Lab Med* 2007; Feb;131(2): p311-7. Al-Agha OM; Axiotis CA.