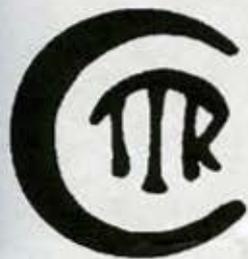


1146

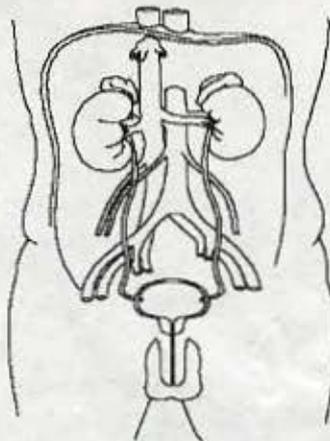


CALIFORNIA
TUMOR TISSUE REGISTRY

“PROSTATE AND GU PATHOLOGY”

Study Cases, Subscription A

September 2000



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
Web page: www.cttr.org
E-mail: cttr@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:

Weldon K. Bullock, MD
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: E. M. Courier, M.D.

Case No. 1 - September 2000

Tissue from: Right testicle

Accession #24126

Clinical Abstract:

A 57-year-old Caucasian male was found to have a right testicular tumor. A right orchiectomy was performed.

Gross Pathology:

The 6.5 cm testicle was completely occupied by a pale gray-tan neoplasm, which was without cyst formation or necrotic foci. The capsule appeared to be intact.

**Contributor: John P. Blanchard, M.D.
Santa Barbara, CA**

Case No. 2 - September 2000

Tissue from: Right testicle

Accession #22370

Clinical Abstract:

After about six months of scrotal swelling, this 19-year-old Caucasian male presented for work-up. Physical examination revealed a rock-hard mass in the right scrotum. A right orchiectomy was performed.

Gross Pathology:

The 8.0 x 5.5 x 5.0 cm testicle had a circumscribed tumor filling the lower pole. Smooth nodular masses appeared on the tunica vaginalis.

Contributor: LLUMC Pathology Group (kt)
Loma Linda, CA

Case No. 3 - September 2000

Tissue from: Prostate

Accession #28499

Clinical Abstract:

This 74-year-old Caucasian male, with a history of prostate malignancy with metastatic disease, succumbed to his disease. An autopsy was performed.

Gross Pathology:

The 6.5 x 6.5 x 5.5 cm prostate contained multiple yellow-tan tumor nodules, the largest of which was 4.0 cm.

Contributor: Reuben Straus, M.D.
Portland, OR

Case No. 4 - September 2000

Tissue from: Bladder

Accession #19792

Clinical Abstract:

During work-up, this 60-year-old male was found to have an abnormal urine cytology. A total cystectomy was performed.

Gross Pathology

The 14.0 x 10.0 x 3.0 cm urinary bladder had a dusky tan, focally edematous mucosa. There were no exophytic lesions.

Contributor: Weldon K. Bullock, M.D.
Pasadena, CA

Case No. 5 - September 2000

Tissue from: Bladder

Accession #24401

Clinical Abstract:

Because of urinary frequency, urgency and dysuria, this 70-year-old female underwent a work up which found a tumor distorting of the entire right side of her bladder.

Gross Pathology:

Multiple pale white-tan mucosal fragments measured up to 0.6 x 0.5 x 0.3 cm each.

Contributor: J. J. Bocian, M.D.
Fresno, CA

Case No. 6 - September 2000

Tissue from: Left ureter

Accession #16424

Clinical Abstract:

This 73-year-old male's chief complaint was swelling of the left lower extremity and left lower quadrant pain. A laparotomy revealed a stenosing infiltrative thickening of the distal third of the left ureter. A left nephrectomy and ureterectomy were performed.

Gross Pathology:

A 6.7 cm long portion of ureter was filled with gray soft tumor.

Contributor: William L. Siefert, M.D.
Canoga Park, CA

Case No. 7 - September 2000

Tissue from: Right kidney

Accession #27456

Clinical Abstract:

After falling during an earthquake, this 86-year-old female began experiencing severe back pain. Work-up for what was initially felt to be trauma-related hemorrhage found a right renal mass. A right nephrectomy was performed.

Gross Pathology:

The 1070 gram specimen included kidney and a 4.5 x 6.0 x 3.5 cm gray-tan hemorrhagic mass in its mid and upper portions.

Contributor: Weldon K. Bullock, M.D.
Pasadena, CA

Case No. 8 - September 2000

Tissue from: Left kidney

Accession #24694

Clinical Abstract:

This 70-year-old female experienced bright red hematuria, left flank and weight loss. A left renal arteriogram showed a large mass in the lower pole of the left kidney. A left nephrectomy was performed.

Gross Pathology:

The 750 gram left kidney was largely replaced by a flesh yellow-tan tumor with numerous small cysts.

Contributor: Beverly Myers, M.D.
Sacramento, CA

Case No. 9 - September 2000

Tissue from: Abdomen

Accession #28483

Clinical Abstract:

Fever, nightsweats, and left upper quadrant pain led this 60-year-old Caucasian male to seek medical attention. Physical examination showed splenomegaly and a CT scan found a large abdominal mass involving the spleen and left kidney.

Gross Pathology:

A 14.5 x 12.0 x 10.5 cm variegated yellow-white mass replaced the upper pole of the kidney and invaded the spleen.

SPECIAL STUDIES (outside facility):

Vimentin	strongly positive
CAM5.2	positive (patchy)
EMA	negative

Contributor: Nelson J. Quigley, M.D.
Anaheim, CA

Case No. 10 - September 2000

Tissue from: Right kidney

Accession #28385

Clinical Abstract:

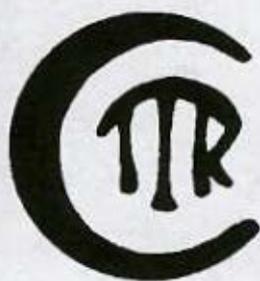
After four months of hematuria and right sided pain, this 29-year-old African American male was found to have a right renal mass with widespread metastases.

Gross Pathology:

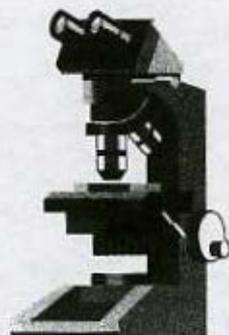
The right kidney with attached adrenal glands weighed 413.7 grams. A 7.5 cm tan-yellow, centrally hemorrhagic and necrotic mass was present in the lower pole of the kidney.

SPECIAL STUDIES:

AE1/AE3	positive
LCA	small lymphocytes immunoreactive
CK7	negative
CK20	negative
Vimentin	focally positive



CALIFORNIA
TUMOR TISSUE REGISTRY



PROSTATE AND GU PATHOLOGY

Minutes – Subscription A

September 2000

SUGGESTED READING (General Topics from Recent Literature):

- Approaches to the Treatment of Patients With Hormone-Sensitive Prostate Cancer. DiPaola, Robert S. *Semin in Oncol* 1999; 26(5):24-27.
- Mechanisms of Action of Taxanes in Prostate Cancer. Sten CA. *Semin in Oncol* 1999; 26(5):3-7.
- Introduction. A Therapeutically Relevant Framework for the Classification of Human Prostate Cancer. Logothetis CJ. *Semin in Oncol* 1999; 26(4):369-374.
- The Biology of Hormone Refractory Prostate Cancer. Why Does It Develop? Isaacs JT. *Urol Clin of North Amer* 1999; 26(2):263-273.
- Gene Therapy for Prostate Cancer. New Perspectives on an Old Problem. Palapattu GS. *Urol Clin of North Amer* 1999; 26(2):353-363.
- Weight, Size, Macroanatomy, and Histology of the Normal Prostate in the Adult Human Female. A Minireview. Zaviacic M, et al. *J of Histotechnol* 2000; 23(1):61-69.

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c/o: Department of Pathology and Human Anatomy
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(909) 558-4788
FAX: (909) 558-0188
E-mail: cttr@linkline.com
Case of the Month: www.llu.edu/llu/cttr/cotm
Web: www.cttr.org

LLUMC Pathology Residents - Spermatocytic seminoma
Riverside - Seminoma, spermatocytic
Baldwin Park - Spermatocytic seminoma
Mountain View (El Camino Hospital) - Spermatocytic seminoma
Oakland - Spermatocytic seminoma (3)
Santa Rosa - Seminoma (2)
Ventura (Unilab) - Seminoma (2)
Santa Barbara (Cottage Hospital) - Seminoma
Monterey (Community Hospital of Monterey Peninsula) - Seminoma
Hayward/Fremont - Seminoma, not spermatocytic (2); Seminoma, spermatocytic (2)
Sacramento (UC Davis) - Spermatocytic seminoma
Nevada (Western Pathology Consultants) - Spermatocytic seminoma
Illinois, Hinsdale (Dupage Pathology Assoc.) - Testis spermatocytic seminoma (1); Seminoma (1)
Iowa City (University of Iowa) - Spermatocytic seminoma
Michigan (Oakwood Hospital) - Spermatocytic seminoma
Louisiana (Louisiana State University Medical Center) - Seminoma
Kentucky (University of Louisville) - Spermatocytic seminoma
Florida (Monroe Regional Medical Center) - Seminoma
Florida (Winter Haven) - Spermatocytic seminoma (1); Seminoma (2)
Florida (Pathology Associates) - Seminoma
North Carolina (WNC Pathology Group) - Seminoma (1); Spermatocytic seminoma (2)
Maryland (Woodbine) - Spermatocytic seminoma (2)
New Jersey (Overlook Hospital) - Seminoma (3)
Pennsylvania (Residents Conemaugh Memorial Hospital) - Spermatocytic seminoma
Pennsylvania (Lehigh Valley Hospital) - Spermatocytic seminoma
New York (Beth Israel Medical Center Residents) - Spermatocytic seminoma
New York (VA Medical Center) - Spermatocytic seminoma
Massachusetts (Berkshire Medical Center) - Spermatocytic seminoma
Canada (Foothill Hospital) - Spermatocytic seminoma
Japan (Shimada City) - Spermatocytic seminoma
Japan (Singapore) - Spermatocytic seminoma
Japan (Kyoto) - Seminoma (3)

DIAGNOSIS:**Spermatocytic Seminoma, testis**

T-78000, M-90633

REFERENCES:

- Eble JE, et al. Spermatocytic Seminoma. *Hum Pathol* 1994; 25(10):1035-1042.
Codesal J, Paniagua R, Regadera J, et al. Significance of DNA Quantification in Testicular Germ Cell Tumors. *Andrologia* 1991; 23(5):381-385.
Ulbright TM, et al. *Armed Forces Institute of Pathology*, Washington, DC, 1999; Chapter 2, 41-58.
Yuasa T, Yoshiki T, Ogawa O, Tanaka T, et al. Detection of Alpha-Fetoprotein in mRNA in Seminoma. *J Androl* 1999; May-June; 20(3):336-340.
Cummings OW, Ulbright TM, Eble JN, et al. Spermatocytic Seminoma. An Immunohistochemical Study. *Hum Pathol* 1994; 25(1):54-59.

- LLUMC Pathology Residents - Mature teratoma with gut-like (enteric) epithelium (4); Ovarian type epithelial tumor of testis - Favor borderline mucinous cystadenoma (1)
- Riverside - Teratoma, mature
- Baldwin Park - Mature teratoma (2); Malignant teratoma (1)
- Mountain View (El Camino Hospital) - Mixed germ cell tumor (teratoma and yolk sac tumor)
- Oakland - Teratoma, mature (3)
- Santa Rosa - Teratoma with focal embryonal carcinoma (1); Mixed germ cell tumor (teratoma and embryonal) (1)
- Ventura (Unilab) - Mature teratoma (2)
- Santa Barbara (Cottage Hospital) - Mixed germ cell tumor—mature teratoma and yolk sac
- Monterey (Community Hospital of Monterey Peninsula) - Teratoma with embryonal carcinoma
- Hayward/Fremont - Teratocarcinoma (4)
- Sacramento (UC Davis) - Immature teratoma with embryonal carcinoma (mixed germ cell)
- Nevada (Western Pathology Consultants) - Teratoma, low grade immaturity
- Illinois, Hinsdale (Dupage Pathology Assoc.) - Testis teratoma (r/o focal immature stroma) (1); Teratoma (1)
- Iowa City (University of Iowa) - Teratoma of low-grade immaturity
- Michigan (Oakwood Hospital) - Teratoma, at least focally immature
- Louisiana (Louisiana State University Medical Center) - Mature teratoma
- Kentucky (University of Louisville) - Mixed germ cell tumor (teratoma and embryonal carcinoma)
- Florida (Monroe Regional Medical Center) - Teratoma
- Florida (Winter Haven) - Teratocarcinoma (1); Immature teratoma (1); Teratoma with yolk sac tumor (1)
- Florida (Pathology Associates) - Teratocarcinoma
- North Carolina (WNC Pathology Group) - Mixed germ cell tumor (teratoma and embryonal carcinoma) (1); Immature teratoma (1); Teratoma and embryonal carcinoma (1)
- Maryland (Woodbine) - Mature teratoma, embryonal carcinoma and yolk sac tumor (2)
- New Jersey (Overlook Hospital) - Teratocarcinoma (3)
- Pennsylvania (Residents Conemaugh Memorial Hospital) - Teratocarcinoma
- Pennsylvania (Lehigh Valley Hospital) - Immature teratoma
- New York (Beth Israel Medical Center Residents) - Teratoma
- New York (VA Medical Center) - Immature teratoma with endodermal sinus carcinoma
- Massachusetts (Berkshire Medical Center) - Teratocarcinoma (mixed germ cell tumor—teratoma and embryonal carcinoma)
- Canada (Foothill Hospital) - Immature teratoma, low grade
- Japan (Shimada City) - Mature teratoma
- Japan (Singapore) - Mixed germ cell tumor—mostly mature teratoma with focus of embryonal carcinoma (teratocarcinoma)
- Japan (Kyoto) - Immature teratoma (3)

DIAGNOSIS:

Teratocarcinoma (mixed germ cell tumor—teratoma and embryonal carcinoma), testis

Director's Note: Due to sampling variation, not every slide showed embryonal carcinoma
T-78000, M-90801

REFERENCES:

- Prow DM. Germ Cell Tumors. Staging, Prognosis, and Outcome. *Semin Urol Oncol* 1998; 16(2):82-93.
- Ahmed T, Bost GJ and Hajdu SI. Teratoma with Malignant Transformation in Germ Cell Tumors In Men. *Cancer* 1985; 56(4):860-863.
- Comiter CV, Kibel AS, Richie JP, et al. Prognostic Features of Teratomas with Malignant Transformation. A Clinicopathologic Study of 25 Cases. *J Urol* 1998; 159(3):859-863.
- Moran CA, Travis WD, Carter D and Koss MN. Metastatic Mature Teratoma in Lung Following Testicular Embryonal Carcinoma and Teratocarcinoma. *Arch Pathol Lab Med* 1993; 117(6):641-644.
- Moul JW, McCarthy WF, Fernandez EB, et al. Percentage of Embryonal Carcinoma and of Vascular Invasion Predicts Pathological Stage In Clinical Stage I Nonseminomatous Testicular Cancer. *Cancer Res* 1994; 54(2):363-364.

- LLUMC Pathology Residents - Poorly differentiated malignancy with tumor giant cells—MFH vs melanoma vs undifferentiated carcinoma
- Riverside - Prostate carcinoma, high grade
- Baldwin Park - Anaplastic carcinoma (1); Sarcomatoid carcinoma vs sarcoma in prostate (1); Pleomorphic sarcoma (1)
- Mountain View (El Camino Hospital) - Pleomorphic sarcoma (MFH?)
- Oakland - Sarcomatoid or metaplastic carcinoma (1); MFH (1); Sarcomatoid spindle cell carcinoma (? bladder origin) (1)
- Santa Rosa - Malignant giant cell tumor (2)
- Ventura (Unilab) - Undifferentiated sarcoma (2)
- Santa Barbara (Cottage Hospital) - High grade neoplasm—sarcoma vs carcinosarcoma
- Monterey (Community Hospital of Monterey Peninsula) - Malignant fibrous histiocytoma
- Hayward/Fremont - Rhabdomyosarcoma (4)
- Sacramento (UC Davis) - Pleomorphic high grade sarcoma (MFH)
- Nevada (Western Pathology Consultants) - High grade sarcoma
- Illinois, Hinsdale (Dupage Pathology Assoc.) - Prostate, pleomorphic sarcoma, "MFH"-like (1); Sarcoma (favor MFH? post radiation) (1)
- Iowa City (University of Iowa) - Sarcomatoid carcinoma
- Michigan (Oakwood Hospital) - Prostatic stromal sarcoma/ storiform pleomorphic MFH
- Louisiana (Louisiana State University Medical Center) - Malignant fibrous histiocytoma
- Kentucky (University of Louisville) - Prostate carcinoma with sarcomatoid features
- Florida (Monroe Regional Medical Center) - Malignant fibrous histiocytoma
- Florida (Winter Haven) - Sarcomatoid carcinoma (1); Sarcoma (2)
- Florida (Pathology Associates) - Sarcoma, malignant fibrous histiocytoma
- North Carolina (WNC Pathology Group) - Pleomorphic rhabdomyosarcoma vs malignant fibrous histiocytoma (1); Poorly differentiated tumor? Sarcomatoid transformation of prostate carcinoma (1); Sarcoma—malignant fibrous histiocytoma, r/o sarcomatoid transformation (1)
- Maryland (Woodbine) - Malignant fibrous histiocytoma (1); Pleomorphic liposarcoma (1)
- New Jersey (Overlook Hospital) - Malignant fibrous histiocytoma (3)
- Pennsylvania (Residents Conemaugh Memorial Hospital) - Leiomyosarcoma? Rhabdomyosarcoma?
- Pennsylvania (Lehigh Valley Hospital) - Poorly differentiated malignant neoplasm favor carcinoma
- New York (Beth Israel Medical Center Residents) - Pleomorphic sarcoma
- New York (VA Medical Center) - Pleomorphic sarcoma favor rhabdomyosarcoma
- Massachusetts (Berkshire Medical Center) - Sarcomatoid carcinoma vs sarcoma
- Canada (Foothill Hospital) - Giant cell carcinoma, prostate
- Japan (Shimada City) - Malignant fibrous histiocytoma
- Japan (Singapore) - Sarcomatoid carcinoma/carcinosarcoma
- Japan (Kyoto) - Malignant fibrous histiocytoma (2)

DIAGNOSIS:

High grade malignant neoplasm with MFH phenotype, prostate

T-77100, M-88300

REFERENCES:

- Binder SW, Said JW, Shintaku IP, Pinkus GS, et al. A Histiocyte-Specific Marker in the Diagnosis of Malignant Fibrous Histiocytoma. Use of Monoclonal Antibody KP-1 (CD68). *Am J Clin Pathol* 1992;97(6):759-763.
- Pezzi CM, Rawlings MS, Jr., Esqro JJ, et al. Prognostic Factors in 227 Patients with Malignant Fibrous Histiocytoma. *Cancer* 1992;69(8):2098-2103.
- Iwasaki H, Yoshitake K, Ohjimi Y, Kikuchi M, et al. Malignant Fibrous Histiocytoma. Proliferate Compartment and Heterogeneity of "Histiocytic" Cells". *Am J Surg Pathol* 1992; 16(8):735-745.
- Kahn A, et al. Unusual and Uncommon Prostatic Lesions. *Semin Roentgenol* 1999; 34(4):350-363.
- Varghese SL, et al. The Prostate Gland. Malignancies Other Than Adenocarcinomas. *Radiol Clin North Am* 2000; 38(1):179-200.

- LLUMC Pathology Residents - High grade transitional cell carcinoma in-situ
- Riverside - Carcinoma in-situ
- Baldwin Park - Carcinoma in-situ, high grade (2); High grade urothelial dysplasia (CIS)
- Mountain View (El Camino Hospital) - Transitional cell carcinoma in-situ
- Oakland - Transitional cell carcinoma, in-situ (3)
- Santa Rosa - Transitional carcinoma in-situ (1); Carcinoma "in-situ" (severe transitional cell dysplasia) (1)
- Ventura (Unilab) - Transitional cell carcinoma in-situ (2)
- Santa Barbara (Cottage Hospital) - Transitional cell carcinoma in-situ, possible focal invasion of membrane propria
- Monterey (Community Hospital of Monterey Peninsula) - In-situ transitional cell carcinoma
- Hayward/Fremont - Transitional cell carcinoma in-situ (4)
- Sacramento (UC Davis) - Flat transitional cell carcinoma in-situ
- Nevada (Western Pathology Consultants) - Transitional cell carcinoma in-situ
- Illinois, Hinsdale (Dupage Pathology Assoc.) - Transitional cell CIS, with marked cystitis (1); Carcinoma in-situ (1)
- Iowa City (University of Iowa) - Carcinoma in-situ
- Michigan (Oakwood Hospital) - Transitional cell carcinoma in-situ
- Louisiana (Louisiana State University Medical Center) - Transitional cell carcinoma in-situ
- Kentucky (University of Louisville) - Pagetoid spread of carcinoma vs transitional cell carcinoma in-situ
- Florida (Monroe Regional Medical Center) - Transitional cell carcinoma in-situ
- Florida (Winter Haven) - Urothelial dysplasia (1); Cystitis cystica glandularis (1); cystitis cystica? Focal urothelial dysplasia (1)
- Florida (Pathology Associates) - Transitional cell carcinoma in-situ
- North Carolina (WNC Pathology Group) - Carcinoma in-situ (2); Transitional cell carcinoma in-situ (1)
- Maryland (Woodbine) - Transitional cell carcinoma in-situ (2)
- New Jersey (Overlook Hospital) - Transitional cell carcinoma in-situ, prostatic urethra (3)
- Pennsylvania (Residents Conemaugh Memorial Hospital) - Carcinoma in-situ
- Pennsylvania (Lehigh Valley Hospital) - In-situ transitional cell carcinoma
- New York (Beth Israel Medical Center Residents) - Poorly differentiated urothelial carcinoma
- New York (VA Medical Center) - Transitional cell carcinoma in-situ
- Massachusetts (Berkshire Medical Center) - Transitional cell carcinoma in-situ
- Canada (Foothill Hospital) - Carcinoma in-situ
- Japan (Shimada City) - Carcinoma in-situ
- Japan (Singapore) - Transitional cell carcinoma in-situ
- Japan (Kyoto) - Non-papillary transitional cell carcinoma (high grade) with glandular metaplasia

DIAGNOSIS:**Flat transitional cell carcinoma in-situ, bladder**

T-74000, M-80102

REFERENCES:

- Koss LG. Evaluation of Patients with Carcinoma In-Situ of the Bladder. *Pathology Annual* 1982; 17 Pt 2:353-359.
- Larsen MP, Steinberg GD, Brendler CB, et al. Use of Ulex Europaeus Agglutinin I (UEAI) to Distinguish Vascular and "Pseudovascular" Invasion in Transitional Cell Carcinoma of the Bladder with Lamina Propria Invasion. *Modern Pathol* 1990;3(1):83-88.
- Kakizoe T, Matumoto K, Nishio Y, et al. Significance of Carcinoma In-Situ and Dysplasia in Association with Bladder Cancer. *J Urol* 1985; 133(3):395-398.
- Riddle PR, Chisholm GD, Trott PA, et al. Flat Carcinoma In-Situ of Bladder. *Br J Urol* 1975; 47(7):829-833.
- Melamed MR, Grabstald H, Whitmore WF, Jr. Carcinoma In-Situ of Bladder. Clinico-Pathologic Study of Case with a Suggested Approach to Detection. *J Urol* 1966; 96(4):466-471.

- LLUMC Pathology Residents - Invasive, high grade transitional cell carcinoma with gland-like lumina (microcystic)
Riverside - Transitional cell carcinoma, high grade
Baldwin Park - Invasive high grade carcinoma (with squamous cell carcinoma) (1); Deeply invasive high grade urothelial carcinoma with focal squamous differentiation (1); High grade invasive transitional cell carcinoma with focal squamous differentiation (1)
Mountain View (El Camino Hospital) - High grade transitional cell carcinoma with myoinvasion and associated carcinoma in-situ
Oakland - Transitional cell carcinoma, invasive, high grade (3)
Santa Rosa - Transitional cell carcinoma, high grade (1); Invasive "high grade" transitional cell carcinoma
Ventura (Unilab) - Transitional cell carcinoma (2)
Santa Barbara (Cottage Hospital) - Infiltrating transitional cell carcinoma, high grade
Monterey (Community Hospital of Monterey Peninsula) - Adenocarcinoma
Hayward/Fremont - High grade transitional cell carcinoma with gland-like lumina (3); Adenocarcinoma, high grade (1)
Sacramento (UC Davis) - Urothelial carcinoma with glandular differentiation, invasive through muscularis propria
Nevada (Western Pathology Consultants) - Invasive transitional cell carcinoma
Illinois, Hinsdale (Dupage Pathology Assoc.) - High-grade, myoinvasive transitional cell carcinoma (1); Transitional carcinoma, high grade (1)
Iowa City (University of Iowa) - Invasive transitional cell carcinoma with squamous differentiation
Michigan (Oakwood Hospital) - Urothelial carcinoma, high grade
Louisiana (Louisiana State University Medical Center) - Transitional cell carcinoma, deeply invasive
Kentucky (University of Louisville) - High grade transitional cell carcinoma with glandular features
Florida (Monroe Regional Medical Center) - Adenocarcinoma
Florida (Winter Haven) - Transitional cell carcinoma (1); Transitional cell carcinoma with glandular features (1); Adenocarcinoma (1)
Florida (Pathology Associates) - High grade transitional carcinoma with sarcomatoid and squamous differentiation
North Carolina (WNC Pathology Group) - Invasive high grade transitional cell carcinoma with glandular differentiation (1); Invasive transitional cell carcinoma, grade IV (1); Poorly differentiated transitional cell carcinoma with sarcomatoid transformation (1)
Maryland (Woodbine) - Transitional cell carcinoma, grade III, infiltrating muscularis propria (2)
New Jersey (Overlook Hospital) - Transitional cell carcinoma with spindle cell metaplasia (grade 4) (3)
Pennsylvania (Residents Conemaugh Memorial Hospital) - Metastatic carcinoma ?
Pennsylvania (Lehigh Valley Hospital) - Invasive carcinoma with squamous and glandular differentiation
New York (Beth Israel Medical Center Residents) - Squamous cell carcinoma
New York (VA Medical Center) - Transitional cell carcinoma, grade 3 with sarcomatoid and glandular patterns
Massachusetts (Berkshire Medical Center) - Sarcomatoid carcinoma (probably transitional cell carcinoma, could be adenocarcinoma)
Canada (Foothill Hospital) - Sarcomatoid carcinoma
Japan (Shimada City) - Transitional cell carcinoma, high grade
Japan (Singapore) - Transitional cell carcinoma, grade 3
Japan (Kyoto) - Transitional cell carcinoma with sarcomatous change (1); Sarcomatoid carcinoma (1); Malignant melanoma (1)

DIAGNOSIS:**High grade transitional cell carcinoma, bladder**

T-74000, M-81203

REFERENCES:

- Noel JC, Thiry L, Verhest A, et al. Transitional Cell Carcinoma of the Bladder. Evaluation of the Role of Human Papilloma Viruses. *Urol* 1994; 44(5):671-675.
- Scher HI. High-Risk Human Papillomavirus Infections and Overexpression of p53 protein as Prognostic Indicators in Transitional Cell Carcinoma of the Urinary Bladder. *J Urol* 1994; 152(2 Pt 1):568-569.
- Pycha A, Mian C, Posch B, Hättel A, et al. Numerical Chromosomal Aberrations in Muscle Invasive Squamous Cell and Transitional Cell Cancer of the Urinary Bladder. An Alternative to Classic Prognostic Indicators? *Urol* 1999; 53(5):1005-1010.
- Buchumensky V, Klein A, Zemer R, et al. Cytokeratin 20. A New Marker for Early Detection of Bladder Cell Carcinoma? *J Urol* 1998; 160 (6 Pt 1):1971-1974.
- Ordenez NG. Thrombomodulin Expression in Transitional Cell Carcinoma. *Am J Clin Pathol* 1998; 110(3):385-390.

- LLUMC Pathology Residents - Lymphoma vs. germ cell tumor (evaluate testis) (3); Lymphoma (2)
- Riverside - Transitional cell carcinoma, high grade
- Baldwin Park - Lymphoma, large cell (1); Periurethral lymphoma, large cell (1); Lymphoma (1)
- Mountain View (El Camino Hospital) - Large cell lymphoma
- Oakland - Non Hodgkin's lymphoma (3)
- Santa Rosa - Metastatic seminoma rule out lymphoma (1); Ureter, peri-ureteral lymphoid tissue, ? node lymphoma vs metastatic seminoma (1)
- Ventura (Unilab) - Malignant lymphoma (2)
- Santa Barbara (Cottage Hospital) - Hematopoietic neoplasm, large cell lymphoma vs granulocytic sarcoma (1)
- Monterey (Community Hospital of Monterey Peninsula) - Lymphoma
- Hayward/Fremont - Malignant lymphoma (LNCC) (4)
- Sacramento (UC Davis) - Lymphoma vs. sarcomatoid carcinoma
- Nevada (Western Pathology Consultants) - Chloroma vs lymphoma
- Illinois, Hinsdale (Dupage Pathology Assoc.) - Large cell lymphoma (1); Lymphoma, diffuse, large cell (1)
- Iowa City (University of Iowa) - Malignant neoplasm, favor lymphoma
- Michigan (Oakwood Hospital) - Malignant neoplasm; ? extra-medullary myeloid tumor
- Louisiana (Louisiana State University Medical Center) - Hematopoietic neoplasm (suspicious of leukemic infiltrate -- Need immunoperoxidase and history (BM findings, etc.)
- Kentucky (University of Louisville) - Lymphoma, large cell, diffuse
- Florida (Monroe Regional Medical Center) - Large cell lymphoma
- Florida (Winter Haven) - Lymphoma-leukemia (1); Lymphoma (2)
- Florida (Pathology Associates) - Lymphoma, large cell, diffuse
- North Carolina (WNC Pathology Group) - Granulocytic sarcoma (1); Granulocytic sarcoma, r/o lymphoma (1); Granulocytic sarcoma (1)
- Maryland (Woodbine) - Lymphoma (2)
- New Jersey (Overlook Hospital) - Large cell lymphoma (3)
- Pennsylvania (Residents Conemaugh Memorial Hospital) - Lymphoma, non-Hodgkin's
- Pennsylvania (Lehigh Valley Hospital) - Poorly differentiated malignant neoplasm/Granulocytic sarcoma, lymphoma carcinoma
- New York (Beth Israel Medical Center Residents) - Non-Hodgkin's lymphoma
- New York (VA Medical Center) - Large cell non-Hodgkin's lymphoma
- Massachusetts (Berkshire Medical Center) - Granulocytic sarcoma vs lymphoma
- Canada (Foothill Hospital) - AML/Granulocytic sarcoma
- Japan (Shimada City) - Liposarcoma, poorly differentiated
- Japan (Singapore) - Non-Hodgkin's lymphoma vs. granulocytic sarcoma
- Japan (Kyoto) - Non-Hodgkin's malignant lymphoma (3)

DIAGNOSIS:**Non-Hodgkin's Lymphoma, ureter**

T-73000, M-95903

Follow-Up: The patient was given only supportive therapy and expired one week later.

REFERENCES:

- Maghfoor I, Koontz P, Weaver-Osterholtz D, and Wiles J. Primary Extra-Nodal Lymphoma of the Urinary Bladder. *South Med J* 2000; 93(3):317-318.
- Buck DS, Peterson MS, Borochovit D, et al. Non-Hodgkin Lymphoma of the Ureter. CT Demonstration with Pathologic Correlation. *Urol Radiol* 1992; 14(3):183-187.
- Delbello MW, Dick WH, Carter CB, et al. Polyclonal B Cell Lymphoma of Renal Transplant Ureter Induced by Cyclosporine Case Report. *J Urol* 1991; 146(6):1613-1614.
- Ligthelm RJ and Lister TA. Malignant Lymphoma of the Ureter. *Br J Urol* 1985; 57(5):587.

LLUMC Pathology Residents - Myolipoma (3); Angiomyolipoma (2)
Riverside - Angiomyolipoma
Baldwin Park - Angiomyolipoma (3)
Mountain View (El Camino Hospital) - Angiomyolipoma
Oakland - Angiomyolipoma (3)
Santa Rosa - Angiomyolipoma (2)
Ventura (Unilab) - Angiomyolipoma (2)
Santa Barbara (Cottage Hospital) - Angiomyolipoma
Monterey (Community Hospital of Monterey Peninsula) - Angiomyolipoma
Hayward/Fremont - Angiomyolipoma (4)
Sacramento (UC Davis) - Angiomyolipoma
Nevada (Western Pathology Consultants) - Angiomyolipoma
Illinois, Hinsdale (Dupage Pathology Assoc.) - Angiomyolipoma (2)
Iowa City (University of Iowa) - Angiomyolipoma
Michigan (Oakwood Hospital) - Angiomyolipoma
Louisiana (Louisiana State University Medical Center) - Angiomyolipoma
Kentucky (University of Louisville) - Angiomyolipoma
Florida (Monroe Regional Medical Center) - Angiomyolipoma
Florida (Winter Haven) - Leiomyosarcoma (1); Angiomyolipoma (2)
Florida (Pathology Associates) - Angiomyolipoma
North Carolina (WNC Pathology Group) - Angiomyolipoma (3)
Maryland (Woodbine) - Angiomyolipoma (2)
New Jersey (Overlook Hospital) - Angiomyolipoma (3)
Pennsylvania (Residents Conemaugh Memorial Hospital) - Low grade neurogenic sarcoma (fibromatosis)
Pennsylvania (Lehigh Valley Hospital) - Angiomyolipoma
New York (Beth Israel Medical Center Residents) - Angiomyolipoma
New York (VA Medical Center) - Angiomyolipoma
Massachusetts (Berkshire Medical Center) - Angiomyolipoma
Canada (Foothill Hospital) - Angiomyolipoma
Japan (Shimada City) - Angiomyolipoma
Japan (Singapore) - Angiomyolipoma
Japan (Kyoto) - Angiomyolipoma (3)

DIAGNOSIS:

Angiomyolipoma, kidney
 T-71000, M-88600

REFERENCES:

- Ferry JA, Malt RA and Young RH. Renal Angiomyolipoma with Sarcomatous Transformation and Pulmonary Metastases. *Am J Surg Pathol* 1991; 15(11):1083-1088.
 Kutcher R, Rosenblatt R, Mitsudo SM, Goldman M and Kogan S. Renal Angiomyolipoma with Sonographic Demonstration of Extension into the Inferior Vena Cava. *Radiology* 1982; 143(3):755-756.
 Silpananta P, Michel RP and Oliver JA. Simultaneous Occurrence of Angiomyolipoma and Renal Cell Carcinoma. Clinical and Pathologic (Including Ultrastructural) Features. *Urol* 1984; 23(2):200-204.
 Lack EE, Dolan MF, Finisio J, et al. Pulmonary and Extrapulmonary Lymphangioleiomyomatosis. Report of a Case with Bilateral Renal Angiomyolipomas, Multifocal Lymphangioleiomyomatosis, and Glial Polyp of the Endocervix. *Am J Surg Pathol* 1986; 10(9):650-657.

- LLUMC Pathology Residents - Renal cell carcinoma, clear cell type—Fuhrman nuclear grade 2-3/4
- Riverside - Renal cell carcinoma
- Baldwin Park - Renal cell carcinoma (3)
- Mountain View (El Camino Hospital) - Clear cell carcinoma, grade 3
- Oakland - Renal cell carcinoma, clear cell type (3)
- Santa Rosa - Renal cell carcinoma, clear cell type (2)
- Ventura (Unilab) - Renal cell carcinoma (2)
- Santa Barbara (Cottage Hospital) - Renal cell carcinoma, clear cell type, grade 3
- Monterey (Community Hospital of Monterey Peninsula) - Renal cell, clear cell type
- Hayward/Fremont - Renal cell carcinoma (4)
- Sacramento (UC Davis) - High grade clear cell renal cell carcinoma vs liposarcoma
- Nevada (Western Pathology Consultants) - Renal cell carcinoma, clear cell type
- Illinois, Hinsdale (Dupage Pathology Assoc.) - Renal cell carcinoma, clear cell type, diffuse (Fuhrman, grade 3-4) (1); Renal cell carcinoma (1)
- Iowa City (University of Iowa) - Renal cell carcinoma
- Michigan (Oakwood Hospital) - Renal cell carcinoma, clear cell type
- Louisiana (Louisiana State University Medical Center) - Clear cell carcinoma
- Kentucky (University of Louisville) - Renal cell adenocarcinoma with clear cell features, grade III/IV
- Florida (Monroe Regional Medical Center) - Renal cell carcinoma
- Florida (Winter Haven) - Chromophobe renal cell carcinoma (1); Clear cell carcinoma (2)
- Florida (Pathology Associates) - Renal cell carcinoma
- North Carolina (WNC Pathology Group) - Chromophobe renal cell carcinoma (2); Renal cell carcinoma (1)
- Maryland (Woodbine) - Renal cell carcinoma, clear cell type, grade II (2)
- New Jersey (Overlook Hospital) - Clear cell carcinoma, grade 3 (3)
- Pennsylvania (Residents Conemaugh Memorial Hospital) - Liposarcoma
- Pennsylvania (Lehigh Valley Hospital) - Renal cell carcinoma
- New York (Beth Israel Medical Center Residents) - Renal cell carcinoma, clear cell type
- New York (VA Medical Center) - Renal cell carcinoma, grade 2, clear cell variant
- Massachusetts (Berkshire Medical Center) - Renal cell carcinoma, grade 4 vs chromophobe type renal cell
- Canada (Foothill Hospital) - Renal cell carcinoma, clear cell type, grade III
- Japan (Shimada City) - Renal cell carcinoma, clear cell type
- Japan (Singapore) - Clear cell – Renal cell carcinoma
- Japan (Kyoto) - Renal cell carcinoma, clear cell type (3)

DIAGNOSIS:

Conventional renal cell carcinoma, clear cell type, kidney

T-71000, M-83123

REFERENCES:

- Murphy WM, Zamboni BR, Emerson LD, et al. Aspiration Biopsy of the Kidney. Simultaneous Collection of Cytologic and Histiologic Specimens. *Cancer* 1985; 56(1):200-205.
- Javidan J, Stricker HJ, Tamboli P, et al. Prognostic Significance of the 1997 TNM Classification of Renal Cell Carcinoma. *J Urol* 1999; 162(4):1277-1281.
- Goldstein NS. Grading of Renal Cell Carcinoma. *Urol Clin North Am* 1999; 26(3):637-642.
- Fetsch PA, Poweres CN, Zakowski MF, et al. Anti-Alpha-Inhibin. Marker of Choice for the Consistent Distinction Between Adrenocortical Carcinoma and Renal Cell Carcinoma in Fine-Needle Aspiration. *Cancer* 1999; 87(3):168-172.
- Renshaw AA and Richie JP. Subtypes of Renal Cell Carcinoma. Different Onset and Sites of Metastatic Disease. *Am J Clin Pathol* 1999; 111(4):539-543.

- LLUMC Pathology Residents - Sarcomatoid renal cell carcinoma (3); Malignant mesothelioma (2)
- Riverside - Leiomyosarcoma
- Baldwin Park - Sarcomatoid renal cell carcinoma (1); Sarcomatoid carcinoma (1); Clear cell sarcoma (1)
- Mountain View (El Camino Hospital) - Sarcomatoid renal cell carcinoma
- Oakland - Sarcomatoid renal cell carcinoma (1); Sarcoma (? MFH vs leiomyosarcoma) (1); Sarcoma, NOS (? inflammatory-derived from ?) (1)
- Santa Rosa - Sarcomatoid renal cell carcinoma (1); Renal cell carcinoma, sarcomatoid type (1)
- Ventura (Unilab) - Anaplastic seminoma (2)
- Santa Barbara (Cottage Hospital) - Sarcomatoid renal cell carcinoma
- Monterey (Community Hospital of Monterey Peninsula) - Renal cell, sarcomatoid type
- Hayward/Fremont - Sarcomatoid renal cell carcinoma (4)
- Sacramento (UC Davis) - Sarcomatoid carcinoma
- Nevada (Western Pathology Consultants) - Sarcomatoid renal cell carcinoma
- Illinois, Hinsdale (Dupage Pathology Assoc.) - Spleen, consistent with sarcomatoid renal cell carcinoma (1); Rhabdomyosarcoma (1)
- Iowa City (University of Iowa) - Sarcomatoid carcinoma
- Michigan (Oakwood Hospital) - Renal cell carcinoma sarcomatoid variant
- Louisiana (Louisiana State University Medical Center) - Sarcomatoid renal cell carcinoma
- Kentucky (University of Louisville) - Sarcomatoid renal cell carcinoma
- Florida (Monroe Regional Medical Center) - Sarcomatoid renal cell carcinoma
- Florida (Winter Haven) - Sarcomatoid carcinoma (2); Sarcoma-liposarcoma (1)
- Florida (Pathology Associates) - Sarcomatoid carcinoma
- North Carolina (WNC Pathology Group) - Sarcomatoid renal cell carcinoma (2); Undifferentiated malignant neoplasm—Sarcomatoid carcinoma, r/o leiomyosarcoma
- Maryland (Woodbine) - Sarcomatoid renal cell carcinoma (2)
- New Jersey (Overlook Hospital) - Pseudosarcomatous renal cell carcinoma (3)
- Pennsylvania (Residents Conemaugh Memorial Hospital) - Renal cell carcinoma, sarcomatoid variant
- Pennsylvania (Lehigh Valley Hospital) - Spindle cell variant of renal cell carcinoma
- New York (Beth Israel Medical Center Residents) - Renal cell carcinoma, sarcomatoid type
- New York (VA Medical Center) - Sarcomatoid carcinoma consistent with renal primary
- Massachusetts (Berkshire Medical Center) - Sarcomatoid carcinoma vs sarcoma
- Canada (Foothill Hospital) - Sarcomatoid renal cell carcinoma
- Japan (Shimada City) - Leiomyosarcoma
- Japan (Singapore) - Sarcomatoid carcinoma of kidney
- Japan (Kyoto) - Malignant rhabdoid tumor (1); Leiomyosarcoma (1); Malignant fibrous histiocytoma (1)

DIAGNOSIS:

Sarcomatoid renal cell carcinoma, kidney
T-Y4100, M-83123

REFERENCES:

- Tomera KM, Farrow GM and Lieber MM. Sarcomatoid Renal Carcinoma. *J Urol* 1983; 130(4):657-659.
- Ro JY, Ayala AG, Sella A, Samuels ML, et al. Sarcomatoid Renal Cell Carcinoma Clinicopathologic. A Study of 42 Cases. *Cancer* 1987; 59(3):516-526.
- Murphy WM, Beckwith JB and Ferrow GM. Tumors of the Kidney, Bladder and Related Structures. Atlas of Tumor Pathology, 3rd Series, Fascicle 11, Washington, DC. *Armed Forces Institute of Pathology* 1994; 113-118.
- Reuter VE and Presti JC, Jr. Contemporary Approach to the Classification of Renal Epithelial Tumors. *Semin Oncol* 2000; 27(2):124-137.
- Delahunt B. Sarcomatoid Renal Carcinoma. The Final Carcinoma. The Final Common Dedifferentiation Pathway of Renal Epithelial Malignancies. *Pathol* 1999; 31(3):185-190.

- LLUMC Pathology Residents - Transitional cell carcinoma (1); Epithelial malignant mesothelioma (2); Clear cell sarcoma (2); Undifferentiated round cell sarcoma (1)
- Riverside - Transitional cell carcinoma, high grade
- Baldwin Park - Medullary carcinoma, kidney (2); Rhabdoid tumor (1)
- Mountain View (El Camino Hospital) - Medullary carcinoma
- Oakland - Renal cell carcinoma (? Granular or ? collecting duct type) (3)
- Santa Rosa - Transitional cell carcinoma (2)
- Ventura (Unilab) - Transitional cell carcinoma (2)
- Santa Barbara (Cottage Hospital) - Transitional cell carcinoma, invasive
- Monterey (Community Hospital of Monterey Peninsula) - Neuroendocrine carcinoma (carcinoid?)
- Hayward/Fremont - Renal cell carcinoma (4)
- Sacramento (UC Davis) - Invasive urothelial carcinoma of renal pelvis
- Nevada (Western Pathology Consultants) - Renal medullary carcinoma
- Illinois, Hinsdale (Dupage Pathology Assoc.) - Renal cell carcinoma, likely chromophobe-type (1); Sarcomatous renal cell carcinoma (1)
- Iowa City (University of Iowa) - Renal medullary carcinoma
- Michigan (Oakwood Hospital) - Renal cell carcinoma, medullary type
- Louisiana (Louisiana State University Medical Center) - Renal cell carcinoma
- Kentucky (University of Louisville) - Medullary carcinoma of the kidney
- Florida (Monroe Regional Medical Center) - Collecting duct carcinoma
- Florida (Winter Haven) - Transitional cell carcinoma (2); Spindle cell renal cell carcinoma (1)
- Florida (Pathology Associates) - Poorly differentiated carcinoma
- North Carolina (WNC Pathology Group) - Neuroendocrine carcinoma (1); Rhabdoid tumor (2)
- Maryland (Woodbine) - Renal medullary carcinoma (2)
- New Jersey (Overlook Hospital) - Renal cell tumor, malignant, granular cell type (1); Rhabdoid tumor (2)
- Pennsylvania (Residents Conemaugh Memorial Hospital) - Poorly differentiated squamous cell carcinoma
- Pennsylvania (Lehigh Valley Hospital) - Renal medullary carcinoma
- New York (Beth Israel Medical Center Residents) - Renal cell carcinoma, granular cell type
- New York (VA Medical Center) - Carcinoma
- Massachusetts (Berkshire Medical Center) - Medullary carcinoma
- Canada (Foothill Hospital) - Granular cell, renal cell carcinoma
- Japan (Shimada City) - Sarcomatoid renal cell carcinoma
- Japan (Singapore) - Renal cell carcinoma, granular cell type
- Japan (Kyoto) - Renal cell carcinoma, granular cell type (1); Sarcomatoid type (1)

DIAGNOSIS:**Renal Medullary Carcinoma**

T-71000, M-85103

CONSULTATION: Bruce Beckwith, M.D. "Renal Medullary Carcinoma"**REFERENCES:**

- Davis I, Jr., Mastoufi FK and Sesterhenn IA. Renal Medullary Carcinoma. The Seventh Sickle Cell Nephropathy. *Am J Surg Pathol* 1995; 19(1):1-11.
- Kennedy SM, Merino MJ, Linehan WM, et al. Collecting Duct Carcinoma of the Kidney. *Hum Pathol* 1990; 21(4): 449-456.
- Kovaacs G, Akhtar M, Beckwith BJ, et al. The Heidelberg Classification of Renal Cell Tumours. *J Pathol* 1997; 183(2):131-133.
- Warren KE, Gidvani-Diaz V and Duval-Arnould B. Renal Medullary Carcinoma in an Adolescent with Sickle Cell Trait. *Pediatrics* 1999; 103(2):E22.
- Avery RA, Harris JE, Davis CJ, Jr., et al. Renal Medullary Carcinoma. Clinical and Therapeutic Aspects of a Newly Described Tumor. *Cancer* 1996; 78(1):128-132.