



CALIFORNIA  
TUMOR TISSUE REGISTRY

*PATHOLOGY of the DIGESTIVE SYSTEM*

Minutes – Subscription B

September 2011



**SUGGESTED READING (General Topics from Recent Literature):**

- Clinicopathologic analysis of 4 perivascular epithelioid cell tumors (PEComas) of the gastrointestinal tract. *Int J Surg Pathol* 2010; Aug;18(4): p243-7. Shi HY; Wei LX; Sun L; Guo AT.
- Gastrointestinal stromal tumors: a review of the literature. *Arch Pathol Lab Med* 2010; Jan;134(1): p134-41. Laurini JA; Carter JE.
- Combined classical carcinoid and goblet cell carcinoid tumor: a new morphologic variant of carcinoid tumor of the appendix. *Am J Surg Pathol* 2010; Aug;34(8): p1163-7. Chetty R; Klimstra DS; Henson DE; Albores-Saavedra J.
- Objective criteria for the grading of venous invasion in colorectal cancer. *Am J Surg Pathol* 2010; Apr;34(4): p454-62. Sato T; Ueno H, et al.
- Diagnostic challenges in the pathologic evaluation of Barrett esophagus. *Arch Pathol Lab Med* 2010; Nov;134(11): p1589-600. Yantiss RK.
- Association of adenocarcinomas of the distal esophagus, "gastroesophageal junction," and "gastric cardia" with gastric pathology. *Am J Surg Pathol* 2010; Oct;34(10): p1521-7. Wijetunge S; Ma Y; De Meester S; Hagen J; De Meester T; Chandrasoma.

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## **FILE DIAGNOSES**

### **CTTR Subscription B**

**September 2011**

**Case 1:**

Mesenteric fibromatosis  
T-64200, M-76100

**Case 2:**

Poorly differentiated malignant neoplasm (nos), associated with Barrett esophagus  
T-62000, M-73330

**Case 3:**

Neuroendocrine carcinoma (carcinoid tumor), small bowel  
T-64000, M-80103

**Case 4:**

Pleomorphic sarcoma with rhabdomyomatous phenotype (pleomorphic rhabdomyosarcoma),  
duodenum  
T-64300, M-89003

**Case 5:**

Mucinous carcinomatosis (pseudomyxoma peritonei), abdominal wall  
T-17340, M-84806

**Case 6:**

Basaloid squamous carcinoma (cloacogenic), anus  
T-X8803, M-81233

**Case 7:**

Squamous cell carcinoma, anus  
T-69000, M-80703

**Case 8:**

Clear cell carcinoma, likely metastatic from kidney, rectum  
T-68000, M-83103

**Case 9:**

Small cell carcinoma, likely metastatic from unknown primary, liver  
T-56000, M-80413

**Case 10:**

Hepatocellular carcinoma, liver  
T-56000, M-81703

Carlsbad (Genoptix Medical Laboratories) - Mesenteric desmoid  
Glendale - Aggressive mesenteric fibromatosis  
Newport Beach (College Hospital) - Solitary fibrous tumor, fibromatosis  
Alabama (Cunningham Pathology) - Fibromatosis/desmoid  
Florida, Orlando - Sclerosing mesenteritis  
Georgia, Atlanta - Fibromatosis  
Illinois (Heartland Regional Medical Center) - Fibromatosis  
Illinois (Evanston Hospital) - Desmoid (fibromatosis)  
Kansas (Coffeyville Regional Medical Center) - Angiomyolipoma  
Kansas (Peterson Laboratory Services) - Desmoid fibromatosis (1); Fibromatosis (1)  
Maryland (University of Maryland) - Desmoid tumor  
Michigan (Henry Ford Hospital) - Mesenteric fibromatosis  
New York (SUNY Stony Brook University Hospital) - Desmoid tumor  
Ohio (Cleveland Clinic) - Mesenteric fibromatosis  
Ohio, Columbus - Abdominal fibromatosis  
Ohio (University of Toledo) - Deep fibromatosis  
Oregon (Oregon Health Science University) - Fibromatosis  
Pennsylvania (Conemaugh Memorial Medical Center) - Fibromatosis  
Pennsylvania (Drexel University College of Medicine) - Intraabdominal desmoid tumor  
Puerto Rico (University of Puerto Rico) - Mesenteric fibromatosis  
South Carolina (Lexington Medical Center) - Fibromatosis, desmoid tumor  
Tennessee, Knoxville - Mesenteric fibromatosis  
Texas, Crystal Beach - Mesenteric fibromatosis  
Texas, Lubbock - Desmoid tumor  
Wisconsin, Madison - Fibromatosis  
Wisconsin (Medical Assessment and Consultation, S.C.) - Sclerosing mesenteritis  
Australia (St. Vincent's Hospital) - Small intestine mesentery, desmoid fibromatosis  
Canada (Pasqua Hospital) - Fibromatosis  
Canada (University of Sherbrooke) - Mesenteric fibrosis/fibromatosis  
Ireland (Connolly Hospital) - Fibromatosis  
Ireland (University Hospital, Galway) - Mesenteric fibromatosis  
Japan (Asashi General Hospital) - Mesenteric fibromatosis (2)  
Japan (Setagaya- Ku) - Fibromatosis  
Japan (Shizuoka Tokushu-kai) - Mesenteric fibromatosis  
Japan (University of Yamanashi) - Desmoid tumor

**Case 1 - Diagnosis:**

Mesenteric fibromatosis  
 T-64200, M-76100

**Case 1 - References:**

Mesenteric fibromatosis mimicking a gastrointestinal stromal tumor. *Conn Med* 2010; Apr;74(4): p197-200. McCormack D; Kesha K; Tittle SL; Saldinger PF.  
 Mesenteric desmoid tumour masquerading as a fat-containing cystic mass. *Br J Radiol* 2010; Oct;83(994): pe200-3. Tan CH; Pua U; Liao KH; Lee HY.  
 Extra-abdominal desmoid tumors: a report of 234 cases. *J Surg Oncol* 2010; Oct 1;102(5): p380-4. Mankin HJ; Hornicek FJ; Springfield DS.  
 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.  
 Risk factors predicting intra-abdominal desmoids in familial adenomatous polyposis: a single centre experience. *Tech Coloproctol* 2010; Jun;14(2): p141-6. Sinha A; Tekkis PP; Neale KF; Phillips RK; Clark SK.

Carlsbad (Genoptix Medical Laboratories) - Melanoma

Glendale - Carcinoma

Newport Beach (College Hospital) - Poorly differentiated carcinoma compatible with adenocarcinoma and Barrett's esophagus

Alabama (Cunningham Pathology) - Met, favor adenocarcinoma rule out melanoma

Florida, Orlando - Poorly differentiated adenocarcinoma, favor metastatic

Georgia, Atlanta - Adenocarcinoma of the gastroesophageal junction arising in Barrett esophagus

Illinois (Heartland Regional Medical Center) - Poorly differentiated non-small cell carcinoma

Illinois (Evanston Hospital) - Large cell lymphoma

Kansas (Coffeyville Regional Medical Center) - Poorly differentiated carcinoma

Kansas (Peterson Laboratory Services) - Poorly differentiated adenocarcinoma, metastatic (2)

Maryland (University of Maryland) - Invasive, poorly differentiated esophageal adenocarcinoma

Michigan (Henry Ford Hospital) - Barrett esophagus with poorly differentiated adenocarcinoma

New York (SUNY Stony Brook University Hospital) - Adenocarcinoma, presumably primary

Ohio (Cleveland Clinic) - Poorly differentiated carcinoma, metastasis

Ohio, Columbus - Poorly differentiated adenocarcinoma

Ohio (University of Toledo) - Poorly differentiated adenocarcinoma

Oregon (Oregon Health Science University) - Poorly differentiated malignant neoplasm, favor carcinoma

Pennsylvania (Conemaugh Memorial Medical Center) - Poorly differentiated adenocarcinoma

Pennsylvania (Drexel University College of Medicine) - Barrett esophagus

Puerto Rico (University of Puerto Rico) - Poorly differentiated carcinoma/angiosarcoma

South Carolina (Lexington Medical Center) - Poorly differentiated carcinoma, favor squamous cell carcinoma

Tennessee, Knoxville - Adenocarcinoma with Barrett's esophagus

Texas, Crystal Beach - Carcinoma small cell (intermediate) consistent with some glandular differentiation

Texas, Lubbock - Poorly differentiated adenocarcinoma

Wisconsin, Madison - Poorly differentiated carcinoma

Wisconsin (Medical Assessment and Consultation, S.C.) - Malignant neoplasm with ulcerating further diagnosis pending IHC evaluation

Australia (St. Vincent's Hospital) - Esophagus, adenocarcinoma in association with Barrett esophagus

Canada (Pasqua Hospital) - Large cell carcinoma

Canada (University of Sherbrooke) - Poorly differentiated carcinoma

Ireland (Connelly Hospital) - Invasive poorly differentiated adenocarcinoma

Ireland (University Hospital, Galway) - Adenocarcinoma

Japan (Asashi General Hospital) - Adenocarcinoma arising in Barrett esophagus (1); Poorly differentiated adenocarcinoma (1)

Japan (Setagaya-Ku) - Squamous cell carcinoma, poorly differentiated

Japan (Shizuoka Tokushu-kai) - Poorly differentiated adenocarcinoma

Japan (University of Yamanashi) - Malignant melanoma

#### **Case 2 - Diagnosis:**

Poorly differentiated malignant neoplasm (nos), associated with Barrett esophagus.

T-62000, M-73330

Director's note: Not all the study set slides showed Barrett esophagus. Subsequently, the tumor was found to be negative for both S100 protein and cytokeratin cocktail. (drc)

#### **Case 2 - References:**

Expression of Her-2 in carcinomas of the esophagus. *Am J Surg Pathol*; 2010; Dec;34(12): p1868-73 Schoppmann SF; Jesch B, et al.

Predictors of progression in Barrett's esophagus: current knowledge and future directions. *Am J Gastroenterol* 2010; Jul;105(7): p1490-1502. Prasad GA; Bansal A; Sharma P; Wang KK

Cigarette smoking and adenocarcinomas of the esophagus and esophagogastric junction: a pooled analysis from the international BEACON consortium. *J Natl Cancer Inst* 2010; Sep 8;102(17): p1344-53. Cook MB; Kamangar F, et al.

Similar immunogenetics of Barrett's oesophagus and cervical neoplasia: is HPV the common denominator? *J Clin Pathol* 2010; Jan;63(1): p1-3. Rajendra S; Robertson IK.  
Diagnostic challenges in the pathologic evaluation of Barrett esophagus. *Arch Pathol Lab Med* 2010; Nov;134(11): p1589-600. Yantiss RK

**Case No. 3, Accession No. 23110**

**September 2011**

Carlsbad (Genoptix Medical Laboratories) - Carcinoid  
Glendale - Metastatic carcinoma, breast  
Newport Beach (College Hospital) - Malignant carcinoma  
Alabama (Cunningham Pathology) - Carcinoid  
Florida, Orlando - Large cell neuroendocrine carcinoma  
Georgia, Atlanta - Neuroendocrine carcinoma  
Illinois (Heartland Regional Medical Center) - Neuroendocrine carcinoma, high grade  
Illinois (Evanston Hospital) - Large cell neuroendocrine carcinoma  
Kansas (Coffeyville Regional Medical Center) - Carcinoid tumor  
Kansas (Peterson Laboratory Services) - Adenocarcinoma with neuroendocrine features (1); Large cell neuroendocrine carcinoma (1)  
Maryland (University of Maryland) - Neuroendocrine carcinoma  
Michigan (Henry Ford Hospital) - Poorly differentiated neuroendocrine carcinoma  
New York (SUNY Stony Brook University Hospital) - Malignant neuroendocrine carcinoma  
Ohio (Cleveland Clinic) - High grade neuroendocrine carcinoma  
Ohio, Columbus - Neuroendocrine carcinoma  
Ohio (University of Toledo) - Neuroendocrine carcinoma, large cell type  
Oregon (Oregon Health Science University) - Neuroendocrine carcinoma with out high risk features (malignant carcinoid)  
Pennsylvania (Conemaugh Memorial Medical Center) - High grade neuroendocrine carcinoma  
Pennsylvania (Drexel University College of Medicine) - Neuroendocrine tumor, high grade  
Puerto Rico (University of Puerto Rico) - Large cell neuroendocrine carcinoma  
South Carolina (Lexington Medical Center) - High grade neuroendocrine carcinoma  
Tennessee, Knoxville - Large cell neuroendocrine carcinoma  
Texas, Crystal Beach - Neuroendocrine carcinoma  
Texas, Lubbock - Poorly differentiated adenocarcinoma with neuroendocrine differentiation  
Wisconsin, Madison - Neuroendocrine carcinoma  
Wisconsin (Medical Assessment and Consultation, S.C.) - Neuroendocrine neoplasm (carcinoid tumor)  
Australia (St. Vincent's Hospital) - Small bowel, high grade neuroendocrine carcinoma (WHO, grade 3)  
Canada (Pasqua Hospital) - Neuroendocrine carcinoma  
Canada (University of Sherbrooke) - High grade neuroendocrine carcinoma  
Ireland (Connelly Hospital) - High grade poorly differentiated endocrine carcinoma  
Ireland (University Hospital, Galway) - Large cell neuroendocrine carcinoma  
Japan (Asashi General Hospital) - Neuroendocrine carcinoma (2)  
Japan (Setagaya- Ku) - Neuroendocrine carcinoma  
Japan (Shizuoka Tokushu-kai) - Endocrine carcinoma  
Japan (University of Yamanashi) - Neuroendocrine carcinoma

**Case 3 - Diagnosis:**

Neuroendocrine carcinoma (carcinoid tumor), small bowel  
T-64000, M-80103

**Case 3 - References:**

Ectopic Cushing's syndrome caused by a well differentiated ACTH-secreting neuroendocrine carcinoma of the ileum.  
*Exp Clin Endocrinol Diabetes* 2010; Aug;118(8): p524-9. Singer J; Werner F, et al..  
Carcinoids and high-grade neuroendocrine carcinomas of the ampulla of vater: a comparative analysis of 139 cases from the surveillance, epidemiology, and end results program-a population based study. *Arch Pathol Lab Med* 2010; Nov;134(11): p1692-6. Albores-Saavedra J; Hart A, et al.

Intra-abdominal fibrosis in a recent cohort of patients with neuroendocrine ('carcinoid') tumours of the small bowel. *QJM* 2010; Mar;103(3): p177-85. Druce MR; Bharwani N, et al.  
 Carcinoid tumors of the gastrointestinal tract: trends in incidence in England since 1971. *Am J Gastroenterol* 2010; Dec;105(12): p2563-9. Ellis L; Shale MJ; Coleman MP.  
 Combined classical carcinoid and goblet cell carcinoid tumor: a new morphologic variant of carcinoid tumor of the appendix. *Am J Surg Pathol* 2010; Aug;34(8): p1163-7. Chetty R; Klimstra DS, et al.  
 Molecular imaging of neuroendocrine tumors. *Semin Oncol* 2010; Dec;37(6): p662-79. Carrasquillo JA; Chen CC.

#### **Case No. 4, Accession No. 15162**

**September 2011**

Carlsbad (Genoptix Medical Laboratories) - Undifferentiated carcinoma with osteoclast-like giant cells  
Glendale - Leiomyosarcoma  
Newport Beach (College Hospital) - Rhabdomyosarcoma  
Alabama (Cunningham Pathology) - Leiomyoma/stromal tumor  
Florida, Orlando - Leiomyosarcoma  
Georgia, Atlanta - Gastrointestinal stromal tumor, probably malignant  
Illinois (Heartland Regional Medical Center) - GIST, high risk (rule out leiomyosarcoma)  
Illinois (Evanston Hospital) - Sarcomatoid neoplasm-sarcomatoid carcinoma vs. sarcoma  
Kansas (Coffeyville Regional Medical Center) - Sarcoma (rhabdoid), malignant fibrous histiocytoma  
Kansas (Peterson Laboratory Services) - Epithelioid GIST (2)  
Maryland (University of Maryland) - Epithelioid gastrointestinal stromal tumor  
Michigan (Henry Ford Hospital) - Pleomorphic rhabdomyosarcoma  
New York (SUNY Stony Brook University Hospital) - Pleomorphic epithelioid GIST  
Ohio (Cleveland Clinic) - Pleomorphic sarcoma  
Ohio, Columbus - Poorly differentiated malignant neoplasm  
Ohio (University of Toledo) - Leiomyosarcoma  
Oregon (Oregon Health Science University) - High grade pleomorphic malignancy, favor leiomyosarcoma  
Pennsylvania (Conemaugh Memorial Medical Center) - High grade sarcoma, favor leiomyosarcoma/GIST if CD117 positive  
Pennsylvania (Drexel University College of Medicine) - Malignant GIST  
Puerto Rico (University of Puerto Rico) - Leiomyosarcoma/epithelioid gastrointestinal stromal tumor (GIST)  
South Carolina (Lexington Medical Center) - High grade leiomyosarcoma  
Tennessee, Knoxville - Leiomyosarcoma  
Texas, Crystal Beach - Gastrointestinal stromal tumor, malignant  
Texas, Lubbock - Leiomyosarcoma  
Wisconsin, Madison - Gastrointestinal stromal tumor (GIST), epithelioid, malignant  
Wisconsin (Medical Assessment and Consultation, S.C.) - High grade sarcoma; further diagnosis pending additional IHC evaluation  
Australia (St. Vincent's Hospital) - Duodenum/Liomyosarcoma (cannot exclude GIST)  
Canada (Pasqua Hospital) - Undifferentiated carcinoma of the pancreas  
Canada (University of Sherbrooke) - Malignant GIST  
Ireland (Connelly Hospital) - Undifferentiated high grade tumor, mesenchymal, IHC, CK and Vimentin  
Ireland (University Hospital, Galway) - Gastrointestinal stromal tumor  
Japan (Asahi General Hospital) - Rhabdomyosarcoma (1); Alveolar soft part sarcoma (1)  
Japan (Setagaya- Ku) - Rhabdomyosarcoma  
Japan (Shizuoka Tokushu-kai) - Leiomyosarcoma  
Japan (University of Yamanashi) - Leiomyosarcoma

#### **Case 4 - Diagnosis:**

Pleomorphic sarcoma with rhabdomyomatous phenotype (pleomorphic rhabdomyosarcoma), duodenum  
 T-64300, M-89003

#### **Case 4 - References:**

Clinicopathologic analysis of patients with adult rhabdomyosarcoma. *Cancer* 2001; Feb 15;91(4): p794-803. Hawkins WG; Hoos A, et al.

A rare case of paratesticular pleomorphic rhabdomyosarcoma diagnosed by fine needle aspiration: a case report. *Diagn Cytopathol* 2010; Feb;38(2): p121-6. Kishore B; Khare P; Gupta RJ; Gupta C; Khare V.

A retroperitoneal mass in an elderly woman. Pleomorphic rhabdomyosarcoma, classic variant, with reactive osteoclast-like giant cells. *Arch Pathol Lab Med* 2005; May;129(5): p703-5. Paner GP; Gasilionis V; Hammadeh R.

Pleomorphic rhabdomyosarcoma in adults: a clinicopathologic study of 38 cases with emphasis on morphologic variants and recent skeletal muscle-specific markers. *Mod Pathol* 2001; Jun;14(6): p595-603. Furlong MA; Mentzel T; Fanburg-Smith JC.

Pleomorphic rhabdomyosarcoma showing smooth-muscle and fibrohistiocytic differentiation: a single case report. *Ultrastruct Pathol* 2010; Feb;34(1): p42-7. Eyden B.

Pleomorphic and dedifferentiated leiomyosarcoma: clinicopathologic and immunohistochemical study of 41 cases. *Hum Pathol* 2010; May;41(5): p663-71. Nicolas MM; Tamboli P; Gomez JA; Czerniak BA.

## Case No. 5, Accession No. 31392

September 2011

Carlsbad (Genoptix Medical Laboratories) - Mucinous carcinoma

Glendale - Pseudomyxoma peritonei

Newport Beach (College Hospital) - Mucinous carcinoma

Alabama (Cunningham Pathology) - Pseudomyxoma peritonei

Florida, Orlando - Pseudomyxoma peritonei

Georgia, Atlanta - Disseminated peritoneal adenomucinosis

Illinois (Heartland Regional Medical Center) - Mucinous material consistent with mucinous neoplasm

Illinois (Evanston Hospital) - Pseudomyxoma

Kansas (Coffeyville Regional Medical Center) - Pseudomyxoma peritonei

Kansas (Peterson Laboratory Services) - Peritoneal adenomucinosis (1); Disseminated peritoneal adenomucinosis (1)

Maryland (University of Maryland) - Disseminated adenomucinosis

Michigan (Henry Ford Hospital) - Pseudomyxoma peritonei secondary to mucocele

New York (SUNY Stony Brook University Hospital) - Recurrent mucinous adenocarcinoma

Ohio (Cleveland Clinic) - Acellular dissecting mucin

Ohio, Columbus - Mucinous adenocarcinoma vs. goblet cell carcinoid

Ohio (University of Toledo) - Pseudomyxoma peritonei

Oregon (Oregon Health Science University) - Adenomucinosis

Pennsylvania (Conemaugh Memorial Medical Center) - Consistent with metastatic mucinous carcinoma

Pennsylvania (Drexel University College of Medicine) - Myxoma

Puerto Rico (University of Puerto Rico) - Appendiceal adenocarcinoma with pseudomyxoma peritonei

South Carolina (Lexington Medical Center) - Peritoneal mucinous carcinomatosis

Tennessee, Knoxville - Recurrent low grade mucinous neoplasm

Texas, Crystal Beach - Myxoma

Texas, Lubbock - Pseudomyxoma peritonei

Wisconsin, Madison - Rule out pseudomyxoma peritonei

Wisconsin (Medical Assessment and Consultation, S.C.) - Low grade mucinous adenocarcinoma

Australia (St. Vincent's Hospital) - Abdominal wall and pelvis, low grade mucinous adenocarcinoma peritonei (adenomucinosis)

Canada (Pasqua Hospital) - Pseudomyxoma peritonei

Canada (University of Sherbrooke) - Pools of acellular mucin/pseudomyxoma peritonei, benign

Ireland (Connelly Hospital) - Pseudomyxoma peritonei acellular low grade adenocarcinoma

Ireland (University Hospital, Galway) - Peritoneal mucinosis

Japan (Asahi General Hospital) - Mucinous adenocarcinoma (1); Mucocele of the appendix (1)

Japan (Setagaya-Ku) - Pseudomyxoma peritonei

Japan (Shizuoka Tokushu-kai) - Pseudomyxoma peritonei

Japan (University of Yamanashi) - Pseudomyxoma peritonei

### Case 5 - Diagnosis:

Mucinous carcinomatosis (pseudomyxoma peritonei), abdominal wall  
T-17340, M-84806

#### Case 5 - References:

Appendiceal mucinous tumors and pseudomyxoma peritonei: histologic features, diagnostic problems, and proposed classification. *Adv Anat Pathol* 2005; Nov;12(6): p291-311. Pai RK; Longacre TA.

Pseudomyxoma peritonei and selected other aspects of the spread of appendiceal neoplasms. *Semin Diagn Pathol* 2004; May;21(2): p134-50. Young RH.

Clinically aggressive pseudomyxoma peritonei: a variant of a histologically indolent process. *J Surg Oncol* 2004; Apr 1;86(1): p10-5. Mohamed F; Gething S, et al.

Appendiceal mucinous neoplasms: controversial issues. *Arch Pathol Lab Med* 2010; Jun;134(6): p864-70. Misdraji J.

Cytology of pseudomyxoma peritonei associated with well-differentiated appendiceal adenocarcinoma. *Acta Cytol* 2008; May-Jun;52(3): p391-4. Siddaraju N; Soundararaghavan J; Iyengar KR.

#### **Case No. 6, Accession No. 13480**

**September 2011**

Carlsbad (Genoptix Medical Laboratories) - Squamous cell carcinoma

Glendale - Squamous cell carcinoma

Newport Beach (College Hospital) - Basaloid squamous cell carcinoma

Alabama (Cunningham Pathology) - Basaloid squamous cell carcinoma

Florida, Orlando - Squamous cell carcinoma, keratinizing

Georgia, Atlanta - Verrucous squamous cell carcinoma

Illinois (Heartland Regional Medical Center) - Squamous cell carcinoma

Illinois (Evanston Hospital) - Squamous carcinoma

Kansas (Coffeyville Regional Medical Center) - Squamous carcinoma, cloacogenic

Kansas (Peterson Laboratory Services) - Squamous cell carcinoma (2)

Maryland (University of Maryland) - Invasive squamous cell carcinoma

Michigan (Henry Ford Hospital) - Verrucous carcinoma

New York (SUNY Stony Brook University Hospital) - Verrucous carcinoma

Ohio (Cleveland Clinic) - Invasive squamous cell carcinoma

Ohio, Columbus - Moderately differentiated squamous cell carcinoma

Ohio (University of Toledo) - Squamous cell carcinoma

Oregon (Oregon Health Science University) - Invasive keratinizing squamous cell carcinoma

Pennsylvania (Conemaugh Memorial Medical Center) - Basaloid squamous cell carcinoma

Pennsylvania (Drexel University College of Medicine) - Squamous cell carcinoma

Puerto Rico (University of Puerto Rico) - Squamous cell carcinoma, keratinizing, moderately differentiated

South Carolina (Lexington Medical Center) - Keratinizing squamous cell carcinoma

Tennessee, Knoxville - Squamous cell carcinoma

Texas, Crystal Beach - Anal carcinoma transitional, cloacogenic

Texas, Lubbock - Cloacal carcinoma

Wisconsin, Madison - Squamous cell carcinoma

Wisconsin (Medical Assessment and Consultation, S.C.) - Invasive keratinizing, squamous cell carcinoma, verrucous carcinoma

Australia (St. Vincent's Hospital) - Anus, invasive keratinizing squamous cell carcinoma

Canada (Pasqua Hospital) - Verrucous carcinoma

Canada (University of Sherbrooke) - Verrucous carcinoma/giant malignant condyloma (Buschke-Lowenstein tumor)

Ireland (Connelly Hospital) - Large cell keratinizing squamous cell carcinoma

Ireland (University Hospital, Galway) - Squamous cell carcinoma

Japan (Asashi General Hospital) - Verrucous carcinoma (1); Squamous cell carcinoma of the anus (1)

Japan (Setagaya-Ku) - Squamous cell carcinoma

Japan (Shizuoka Tokushu-kai) - Verrucous carcinoma

Japan (University of Yamanashi) - Squamous cell carcinoma

#### **Case 6 - Diagnosis:**

Basaloid squamous carcinoma (cloacogenic), anus  
T-X8803, M-81233



#### Case 6 - References:

Deep-seated rectal/anal basaloid carcinoma: useful immunocytochemistry in rare squamous cell carcinoma variants. *Cytopathology* 2009; Oct;20(5): p315-20. Ghigna MR; Drak Alsibai K, et al.  
Human papillomavirus infection and tumours of the anal canal: correlation of histology, PCR detection in paraffin sections and serology. *APMIS* 2007; Mar;115(3): p195-203. Tachezy R; Jirasek T, et al.  
Cytomorphologic diagnosis of basaloid squamous cell carcinoma: a case report. *Acta Cytol* 2009; Jan-Feb;53(1): p89-92. Joshi D; Shivkumar VB; Sharma SM; Gangane N.  
Aggressive treatment approach for cloacogenic carcinoma of the anorectum: report from a single cancer center. *Dig Surg* 2010;27(4): p297-301. Bertani E; Chiappa A, et al.  
Diagnostic problems in anal pathology. *Adv Anat Pathol* 2008; Sep;15(5): p263-78. Longacre TA; Kong CS; Welton ML.

#### Case No. 7, Accession No. 12613

September 2011

Carlsbad (Genoptix Medical Laboratories) - Basaloid squamous cell carcinoma  
Glendale - Basaloid squamous cell carcinoma  
Newport Beach (College Hospital) - Squamous cell carcinoma  
Alabama (Cunningham Pathology) - Highly differentiated squamous lesion  
Florida, Orlando - Squamous cell carcinoma, basaloid type  
Georgia, Atlanta - Squamous cell carcinoma  
Illinois (Heartland Regional Medical Center) - Squamous cell carcinoma  
Illinois (Evanston Hospital) - Basaloid squamous carcinoma  
Kansas (Coffeyville Regional Medical Center) - Keratinizing squamous cell carcinoma  
Kansas (Peterson Laboratory Services) - Basaloid squamous cell carcinoma (2)  
Maryland (University of Maryland) - Invasive squamous cell carcinoma, keratinizing  
Michigan (Henry Ford Hospital) - Invasive squamous cell carcinoma  
New York (SUNY Stony Brook University Hospital) - Anal squamous cell carcinoma with basal cell features  
Ohio (Cleveland Clinic) - Invasive squamous cell carcinoma  
Ohio, Columbus - Squamous cell carcinoma  
Ohio (University of Toledo) - Squamous cell carcinoma  
Oregon (Oregon Health Science University) - Invasive squamous cell carcinoma with basaloid features  
Pennsylvania (Conemaugh Memorial Medical Center) - Squamous cell carcinoma  
Pennsylvania (Drexel University College of Medicine) - Squamous cell carcinoma  
Puerto Rico (University of Puerto Rico) - Squamous cell carcinoma, keratinizing, moderately differentiated  
South Carolina (Lexington Medical Center) - Invasive keratinizing squamous cell carcinoma, anus origin  
Tennessee, Knoxville - Squamous cell carcinoma  
Texas, Crystal Beach - Squamous carcinoma consistent with lymphoepithelial features  
Texas, Lubbock - Squamous cell carcinoma  
Wisconsin, Madison - Squamous cell carcinoma  
Wisconsin (Medical Assessment and Consultation, S.C.) - Squamous cell carcinoma with basaloid cell differentiation  
Australia (St. Vincent's Hospital) - Anorectal junction, squamous cell carcinoma  
Canada (Pasqua Hospital) - Squamous cell carcinoma  
Canada (University of Sherbrooke) - Mucoepidermoid carcinoma  
Ireland (Connolly Hospital) - Squamous cell carcinoma  
Ireland (University Hospital, Galway) - Squamous cell carcinoma  
Japan (Asashi General Hospital) - Basosquamous cell carcinoma (1); Squamous cell carcinoma (1)  
Japan (Setagaya-Ku) - Squamous cell carcinoma  
Japan (Shizuoka Tokushu-kai) - Cloacogenic carcinoma  
Japan (University of Yamanashi) - Squamous cell carcinoma

#### Case 7 - Diagnosis:

Squamous cell carcinoma, anus  
T-69000, M-80703

#### Case 7 - References:

Anal-rectal cytology: a review. *Diagn Cytopathol* 2010; Jul;38(7): p538-46. Bean SM; Chhieng DC.  
Elevated anal squamous cell carcinoma risk associated with benign inflammatory anal lesions. *Gut* 2006; May;55(5): p703-7. Nordenvall C; Nyren O; Ye W.  
Prevalence and risk factors for anal cytologic abnormalities and human papillomavirus infection in a rural population of HIV-infected males. *Dis Colon Rectum* 2007; Jul;50(7): p1011-6. Ciobotaru B; Leiman G, et al.  
Role of human papillomavirus in squamous cell metaplasia-dysplasia-carcinoma of the rectum. *Am J Surg Pathol* 2007; Jun;31(6): p919-25. Kong CS; Welton ML; Longacre TA.  
Immunohistochemical staining for p63 is useful in the diagnosis of anal squamous cell carcinomas. *Am J Surg Pathol* 2007; Feb;31(2): p285-90. Owens SR; Greenson JK.

See also references from case 6.

#### **Case No. 8, Accession No. 22642**

**September 2011**

Carlsbad (Genoptix Medical Laboratories) - Granular cell tumor  
Glendale - Pecoma  
Newport Beach (College Hospital) - Benign polypoid histiocytoma/clear cell tumor  
Alabama (Cunningham Pathology) - Glassy cell carcinoma  
Florida, Orlando - Paranglioma  
Georgia, Atlanta - Alveolar soft part sarcoma  
Illinois (Heartland Regional Medical Center) - Granular cell tumor  
Illinois (Evanston Hospital) - Clear cell neoplasm, malignant  
Kansas (Coffeyville Regional Medical Center) - Hamartomatous polyp  
Kansas (Peterson Laboratory Services) - Clear cell carcinoma (1); Extrapulmonary clear cell tumor (1)  
Maryland (University of Maryland) - Granular cell tumor  
Michigan (Henry Ford Hospital) - Solid alveolar soft part sarcoma  
New York (SUNY Stony Brook University Hospital) - Rhabdomyoma  
Ohio (Cleveland Clinic) - Alveolar sarcoma of soft parts  
Ohio, Columbus - Alveolar soft parts sarcoma vs. alveolar rhabdomyosarcoma  
Ohio (University of Toledo) - Paranglioma  
Oregon (Oregon Health Science University) - Pecoma  
Pennsylvania (Conemaugh Memorial Medical Center) - Clear cell carcinoma  
Pennsylvania (Drexel University College of Medicine) - Alveolar soft part sarcoma  
Puerto Rico (University of Puerto Rico) - Paranglioma/alveolar soft parts sarcoma/Pecoma/Granular cell tumor  
South Carolina (Lexington Medical Center) - Perivascular epithelioid cell tumor  
Tennessee, Knoxville - Alveolar soft part sarcoma vs. paranglioma  
Texas, Crystal Beach - Leiomyoma epithelioid consistent with inflammatory changes  
Texas, Lubbock - Paranglioma  
Wisconsin, Madison - Paranglioma vs. carcinoma  
Wisconsin (Medical Assessment and Consultation, S.C.) - Clear cell carcinoma  
Australia (St. Vincent's Hospital) - Rectum, Pecoma  
Canada (Pasqua Hospital) - Melanoma  
Canada (University of Sherbrooke) - Pecoma, clear cell sugar tumor  
Ireland (Connolly Hospital) - Alveolar soft part sarcoma  
Ireland (University Hospital, Galway) - Pecoma  
Japan (Asahi General Hospital) - Granular cell tumor (1); Metastatic renal cell carcinoma, clear cell type (1)  
Japan (Setagaya- Ku) - Clear cell carcinoma  
Japan (University of Yamanashi) - Clear cell sarcoma

#### **Case 8 - Diagnosis:**

Clear cell carcinoma, likely metastatic from kidney, rectum  
T-68000, M-83103

Consultation: AFIP (1976): "Metastatic renal cell carcinoma."

#### Case 8 - References:

- Pediatric renal cell carcinoma: clinical, pathologic, and molecular abnormalities associated with the members of the mit transcription factor family. *Am J Clin Pathol* 2006; Sep;126(3): p349-64. Ramphal R; Pappo A; Zielenska M; Grant R; Ngan BY.
- Pediatric renal cell carcinoma: single institution 25-year case series and initial experience with partial nephrectomy. *J Urol* 2006; Apr;175(4): p1456-60; discussion 1460. Cook A; Lorenzo AJ; Salle JL, et al.
- Renal cell carcinoma in children and young adults: analysis of clinicopathological, immunohistochemical and molecular characteristics with an emphasis on the spectrum of Xp11.2 translocation-associated and unusual clear cell subtypes. *Histopathology* 2008; Nov;53(5): p533-44. Wu A; Kunju LP; Cheng L; Shah RB.
- Targeted therapy in the treatment of metastatic renal cell cancer. *Oncology* 2009; 77 Suppl 1:122-31. Di Lorenzo G; Scagliarini S, et al.
- Rapid development of metastatic Xp11 translocation renal cell carcinoma in a girl treated for neuroblastoma. *J Pediatr Hematol Oncol* 2009; Aug;31(8): p602-4. Hedgepeth RC; Zhou M; Ross J.
- Cytologic and cytogenetic diagnosis of pediatric renal cell carcinoma associated with t(X; 17). *Acta Cytol* 2008; May-Jun;52(3): p384-6. Barroca H; Correia C; Castedo S.

#### **Case No. 9, Accession No. 31415**

**September 2011**

- Carlsbad (Genoptix Medical Laboratories) - Angiosarcoma
- Glendale - Metastatic small cell carcinoma
- Newport Beach (College Hospital) - Neuroendocrine carcinoma
- Alabama (Cunningham Pathology) - Diffuse large B-cell lymphoma
- Florida, Orlando - Small cell carcinoma
- Georgia, Atlanta - Metastatic small cell carcinoma
- Illinois (Heartland Regional Medical Center) - Small cell anaplastic carcinoma, probably metastatic
- Illinois (Evanston Hospital) - Small cell carcinoma
- Kansas (Coffeyville Regional Medical Center) - Small cell (oat cell) carcinoma
- Kansas (Peterson Laboratory Services) - Metastatic neuroendocrine carcinoma (1); High grade neuroendocrine carcinoma (1)
- Maryland (University of Maryland) - Metastatic small cell carcinoma
- Michigan (Henry Ford Hospital) - Angiosarcoma
- New York (SUNY Stony Brook University Hospital) - Undifferentiated carcinoma with neuroendocrine features
- Ohio (Cleveland Clinic) - Small cell carcinoma
- Ohio, Columbus - Malignant small round blue cell tumor, ddx: Hepatoblastoma, embryonal sarcoma, PNET, small cell carcinoma, lymphoma
- Ohio (University of Toledo) - Poorly differentiated neuroendocrine carcinoma, small cell type
- Oregon (Oregon Health Science University) - Metastatic small cell carcinoma
- Pennsylvania (Conemaugh Memorial Medical Center) - Small blue cell tumor, favor small cell carcinoma
- Pennsylvania (Drexel University College of Medicine) - Small cell carcinoma
- Puerto Rico (University of Puerto Rico) - Small cell neuroendocrine carcinoma, lymphoma
- South Carolina (Lexington Medical Center) - Poorly differentiated neuroendocrine carcinoma, metastatic
- Tennessee, Knoxville - Small cell carcinoma
- Texas, Crystal Beach - Small cell carcinoma primary or metastatic
- Texas, Lubbock - Poorly differentiated hepatocellular carcinoma
- Wisconsin, Madison - Metastatic small cell carcinoma
- Wisconsin (Medical Assessment and Consultation, S.C.) - High grade carcinoma with features of neuroendocrine carcinoma and small cell anaplastic carcinoma
- Australia (St. Vincent's Hospital) - Liver, small cell carcinoma
- Canada (Pasqua Hospital) - Small cell carcinoma
- Canada (University of Sherbrooke) - Metastatic small cell neuroendocrine carcinoma of the pancreas
- Ireland (Connolly Hospital) - Small cell carcinoma
- Ireland (University Hospital, Galway) - Undifferentiated small cell tumor
- Japan (Asashi General Hospital) - Small cell carcinoma arising inn intrahepatic bile duct (2)
- Japan (Setagaya- Ku) - Malignant lymphoma
- Japan (Shizuoka Tokushu-kai) - Metastatic small cell carcinoma

Japan (University of Yamanashi) - Malignant lymphoma

**Case 9 - Diagnosis:**

Small cell carcinoma, likely metastatic from unknown primary, liver  
T-56000, M-80413

**Case 9 - References:**

Small cell carcinoma of unknown primary. *Semin Oncol* 2007; Feb;34(1): p39-42. Lobins R; Floyd J.

The pathology of extrapulmonary small cell carcinoma. *Semin Oncol* 2007; Feb;34(1): p30-8. Frazier SR; Kaplan PA; Loy TS.

Widespread metastases in small cell carcinoma of the prostate on FDG PET/CT. *Clin Nucl Med* 2009; Sep;34(9): p598-600. Yilmaz M; Celen Z, et al.

Small cell (neuroendocrine) carcinoma of the prostate: etiology, diagnosis, prognosis, and therapeutic implications - a retrospective study of 30 patients from the rare cancer network. *Am J Med Sci* 2008; Dec;336(6): p478-88. Stein ME; Bernstein Z, et al.

**Case No. 10, Accession No. 19541**

**September 2011**

Carlsbad (Genoptix Medical Laboratories) - Clear cell carcinoma of liver

Glendale - Hepatocellular carcinoma

Newport Beach (College Hospital) - Hepatocellular carcinoma

Alabama (Cunningham Pathology) - Pleomorphic hepatocellular carcinoma

Florida, Orlando - Hepatocellular carcinoma, clear cell variant

Georgia, Atlanta - Hepatocellular carcinoma with clear cell features

Illinois (Heartland Regional Medical Center) - Hepatocellular carcinoma

Illinois (Evanston Hospital) - Hepatocellular carcinoma

Kansas (Coffeyville Regional Medical Center) - Hepatocellular carcinoma

Kansas (Peterson Laboratory Services) - Hepatocellular carcinoma, clear cell variant (2)

Maryland (University of Maryland) - Hepatocellular carcinoma, poorly differentiated

Michigan (Henry Ford Hospital) - Hepatocellular carcinoma

New York (SUNY Stony Brook University Hospital) - Hepatocellular carcinoma

Ohio (Cleveland Clinic) - Clear cell hepatocellular carcinoma

Ohio, Columbus - Hepatocellular carcinoma

Ohio (University of Toledo) - Hepatocellular carcinoma, clear cell type

Oregon (Oregon Health Science University) - Hepatocellular carcinoma, poorly differentiated with clear cell features

Pennsylvania (Conemaugh Memorial Medical Center) - Hepatocellular carcinoma

Pennsylvania (Drexel University College of Medicine) - Hepatocellular carcinoma

Puerto Rico (University of Puerto Rico) - Hepatocellular carcinoma

South Carolina (Lexington Medical Center) - Hepatocellular carcinoma

Tennessee, Knoxville - Adrenocortical carcinoma

Texas, Crystal Beach - Hepatocellular carcinoma

Texas, Lubbock - Hepatocellular carcinoma, clear cell type

Wisconsin, Madison - Hepatocellular carcinoma

Wisconsin (Medical Assessment and Consultation, S.C.) - Hepatocellular carcinoma

Australia (St. Vincent's Hospital) - Liver, hepatocellular carcinoma

Canada (Pasqua Hospital) - Hepatocellular carcinoma

Canada (University of Sherbrooke) - Hepatocellular carcinoma

Ireland (Connelly Hospital) - Hepatocellular carcinoma

Ireland (University Hospital, Galway) - Hepatocellular carcinoma

Japan (Asashi General Hospital) - Hepatocellular carcinoma (2)

Japan (Setagaya-Ku) - Hepatocellular carcinoma

Japan (Shizuoka Tokushu-kai) - Hepatocellular carcinoma

Japan (University of Yamanashi) - Hepatocellular carcinoma

**Case 10 - Diagnosis:**

Hepatocellular carcinoma, liver  
T-56000, M-81703

**Case 10 - References:**

Glypican-3: a novel diagnostic marker for hepatocellular carcinoma and more. *Adv Anat Pathol* 2009; Mar;16(2): p125-9. Kandil DH; Cooper K.

Primary clear cell carcinoma of liver--clinicopathologic features and surgical results of 18 cases. *Hepatogastroenterology* 2006; Jan-Feb;53(67): p128-32. Lao XM; Zhang YQ; Jin X; Lin XJ; Guo RP; Li GH; Li JQ.

Synchronous renal cell carcinoma and clear cell hepatocellular carcinoma mimicking metastatic disease. *Pathol Res Pract* 2010; May 15;206(5): p342-5. Hou TC; Wu CC; Yang CR; Wang J.

Case of clear-cell hepatocellular carcinoma that developed in the normal liver of a middle-aged woman. *World J Gastroenterol* 2008; Jan 7;14(1): p129-31. Takahashi A; Saito H, et al..

Hepatic angiomyolipoma mimicking hepatic clear cell carcinoma. *J Int Med Res* 2009; Jan-Feb;37(1): p257-63. Chen P; Yuan T; Liu H.