



CALIFORNIA  
TUMOR TISSUE REGISTRY

## *PULMONARY & MEDIASTINAL PATHOLOGY*

Minutes – Subscription B

March 2011



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

- Tomaszek SC, Kim Y, Cassivi SD, Jensen MR, Shen KH, Nichols FC, Deschamps C, Wigle DA. Bronchial resection margin length and clinical outcome in non-small cell lung cancer. *Eur J Cardiothorac Surg*. 2011; Mar 28. [Epub ahead of print].
- Ohtaki Y, Yoshida J, Ishii G, Aokage K, Hishida T, Nishimura M, Takeyoshi I, Nagai K. Prognostic significance of a solid component in pulmonary adenocarcinoma. *Ann Thorac Surg*. 2011; Apr;91(4):1051-7.
- Hayashi T, Haba R, Tanizawa J, Katsuki N, Kadota K, Miyai Y, Bando K, Shibuya S, Nakano M, Kushida Y. Cytopathologic features and differential diagnostic considerations of primary lymphoepithelioma-like carcinoma of the lung. *Diagn Cytopathol*. 2011; Mar 22. doi: 10.1002/dc.21670. [Epub ahead of print].
- Minot DM, Jaben E, Aubry MC, Voss JS, Vine RL, Lee PU, Carlson SK, Clayton AC. Evolution of transthoracic fine needle aspiration and core needle biopsy practice: A comparison of two time periods, 1996-1998 and 2003-2005. *Diagn Cytopathol*. 2011; Mar 22. doi: 10.1002/dc.21666. [Epub ahead of print].
- Schneider F, Tazelaar HD. The lung and systemic disease. A practical approach for the surgical pathologist. *Pathologica*. 2010; Dec;102(6):506-24.
- Barbareschi M, Cavazza A, Calabrese F, Carella R, Maffessanti M, Leslie KO. Small airways diseases. *Pathologica*. 2010; Dec;102(6):489-505.
- Cancellieri A, Dalpiaz G, Trisolini R, Ricchiuti E, Pesci A. Granulomatous lung disease. *Pathologica*. 2010; Dec;102(6):464-8.

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## **FILE DIAGNOSES**

**CTTR Subscription B**

**March 2011**

**Case 1:**

Lymphoepithelioma-like squamous cell carcinoma, lung  
T-89090, M-80703

**Case 2:**

Adenocarcinoma, lung  
T-28000, M-81403

**Case 3:**

Atypical carcinoid tumor (neuroendocrine carcinoma), lung  
T-28000, M-82401

**Case 4:**

Large cell neuroendocrine carcinoma, lung  
T-28000, M-80123

**Case 5:**

Solitary fibrous tumor, lung  
T-28000, M-80000

**Case 6:**

Monophasic synovial sarcoma (spindle cell variant), lung  
T-28000, M-90403

**Case 7:**

Spindle cell thymoma, WHO type A, mediastinum  
T-Y2300, M-85800

**Case 8:**

Thymoma, favor WHO type A, mediastinum  
T-Y2300, M-85803

**Case 9:**

Thymoma, WHO type B1, mediastinum  
T-98020, M-85800

**Case 10:**

Thymic carcinoma (malignant thymoma, WHO type C), mediastinum  
T-Y2300, M-85800

Carlsbad (Genopix Medical Laboratory) - Lymphoepithelioma-like carcinoma  
Costa Mesa (College Hospital) - Squamous cell carcinoma  
Glendale - Squamous cell carcinoma  
San Diego (Heartland Regional Medical Center) - Squamous cell carcinoma, poorly differentiated  
San Diego (Naval Medical Center) - Squamous cell carcinoma  
Florida (Munroe Regional Medical Center) - Squamous cell carcinoma  
Florida (Naples Pathology Associates) - Squamous cell carcinoma of lung  
Georgia, Atlanta - Squamous cell carcinoma  
Kansas (Coffeyville Regional Medical Center) - Squamous cell carcinoma  
Kansas (Peterson Laboratory Services) - Large cell carcinoma  
Massachusetts (BWH Pathology) - Squamous cell carcinoma  
Michigan (Henry Ford Hospital Residents) - Squamous cell carcinoma, poorly differentiated  
New Mexico (The University of New Mexico) - Squamous cell carcinoma  
New York (Buffalo General Hospital Residents) - Poorly differentiated squamous cell carcinoma, lung  
New York (SUNY Downstate Medical Center Residents) - Squamous cell carcinoma  
New York (SUNY Stony Brook) - Poorly differentiated squamous cell carcinoma  
New York (Westchester Medical Center) - Squamous cell carcinoma, poorly differentiated  
Ohio, Columbus - Squamous cell carcinoma, moderately differentiated  
Ohio (University of Toledo Medical Center) - Squamous cell carcinoma, lung  
Pennsylvania (Conemaugh Valley Memorial Hospital) - Squamous cell carcinoma  
Pennsylvania (Drexel University College of Medicine) - Squamous cell carcinoma  
Tennessee, Knoxville - Squamous cell carcinoma  
Texas, Crystal Beach - Squamous cell carcinoma, poorly differentiated, lymphoepithelial variant  
Texas, Lubbock - Squamous cell carcinoma  
Wisconsin (Medical Assessment of Consultation S.C.) - High grade squamous cell carcinoma  
Wisconsin (St. Mary's Hospital) - Squamous cell carcinoma  
Australia (St. Vincents Hospital) - Poorly differentiated squamous cell carcinoma  
Canada (Pasqua Hospital) - Squamous cell carcinoma  
Canada (University of Sherbrooke) - Squamous cell carcinoma  
England (John Radcliffe Hospital) - Squamous cell carcinoma  
Ireland (University College Hospital Galway) - Squamous cell carcinoma  
Japan (Asashi General Hospital) - Squamous cell carcinoma  
Japan (Setagaya-Ku) - Squamous cell carcinoma  
Spain (Provisa Medical Center) - Squamous cell carcinoma  
The Netherlands, Amstelveen - Squamous cell carcinoma

**Case 1 - Diagnosis:**

Lymphoepithelioma-like squamous cell carcinoma, lung  
T-89090, M-80703

**Case 1 - References:**

- Fatima N, Cohen C, Lawson D, Siddiqui MT. Combined double CK5/P63 stain: Useful adjunct test for diagnosing pulmonary squamous cell carcinoma. *Diagn Cytopathol*. 2011; Apr 6. doi: 10.1002/dc.21678. [Epub ahead of print].
- Drăgan AM, Roșca E, Muțiu G. Cytologic and histopathologic diagnosis in bronchopulmonary squamous cell carcinoma. *Rom J Morphol Embryol*. 2011;52(1Suppl):395-8.
- Hamamoto Y, Takano N, Yamada K, Kamimura M. [A case of coexisting malignant mesothelioma and squamous cell carcinoma of the lung]. *Gan To Kagaku Ryoho*. 2011; Feb;38(2):267-70. Japanese.
- Mong C, Garon EB, Fuller C, Mahtabifard A, Mirocha J, Mosenifar Z, McKenna R. High prevalence of lung cancer in a surgical cohort of lung cancer patients a decade after smoking cessation. *J Cardiothorac Surg*. 2011; Feb 25;6:19.

Rana N, Khurshid H. The evolving role of histology in the treatment of non-small cell lung cancer. *Med Health R I.* 2010; Oct;93(10):317-9.

Nizzoli R, Tiseo M, Gelsomino F, Bartolotti M, Majori M, Ferrari L, De Filippo M, Rindi G, Silini EM, Guazzi A, Ardizzoni A. Accuracy of fine needle aspiration cytology in the pathological typing of non-small cell lung cancer. *J Thorac Oncol.* 2011; Mar;6(3):489-93.

## **Case No. 2, Accession No. 31236**

**March 2011**

Carlsbad (Genopix Medical Laboratory) - Mucoepidermoid carcinoma  
Costa Mesa (College Hospital) - Adenosquamous carcinoma  
Glendale - Mucoepidermoid carcinoma  
San Diego (Heartland Regional Medical Center) - Adenocarcinoma, moderately differentiated  
San Diego (Naval Medical Center) - Adenocarcinoma  
Florida (Munroe Regional Medical Center) - Adenocarcinoma  
Florida (Naples Pathology Associates) - Adenocarcinoma of lung  
Georgia, Atlanta - Adenocarcinoma  
Kansas (Coffeyville Regional Medical Center) - Adenocarcinoma  
Kansas (Peterson Laboratory Services) - Adenocarcinoma, grade 3/4  
Massachusetts (BWH Pathology) - Adenocarcinoma  
Michigan (Henry Ford Hospital Residents) - Adenocarcinoma with squamous differentiation  
New Mexico (The University of New Mexico) - Adenocarcinoma  
New York (Buffalo General Hospital Residents) - Moderately differentiated adenocarcinoma, lung  
New York (SUNY Downstate Medical Center Residents) - Adenocarcinoma, adenosquamous carcinoma  
New York (SUNY Stony Brook) - Adenocarcinoma, high grade  
New York (Westchester Medical Center) - Adenocarcinoma of the lung, moderately differentiated  
Ohio, Columbus - Adenocarcinoma, moderately differentiated  
Ohio (University of Toledo Medical Center) - Adenocarcinoma, lung  
Pennsylvania (Conemaugh Valley Memorial Hospital) - Adenocarcinoma, Grade II  
Pennsylvania (Drexel University College of Medicine) - Adenosquamous carcinoma  
Tennessee, Knoxville - Adenosquamous cell carcinoma  
Texas, Crystal Beach - Adenocarcinoma, lung  
Texas, Lubbock - Adenocarcinoma  
Wisconsin (Medical Assessment of Consultation S.C.) - Adenocarcinoma  
Wisconsin (St. Mary's Hospital) - Adenocarcinoma  
Australia (St. Vincents Hospital) - Moderately differentiated adenocarcinoma  
Canada (Pasqua Hospital) - Adenocarcinoma  
Canada (University of Sherbrooke) - Adenocarcinoma  
England (John Radcliffe Hospital) - Adenosquamous carcinoma  
Ireland (University College Hospital Galway) - Adenocarcinoma  
Japan (Asashi General Hospital) - Adenocarcinoma, mixed subtype  
Japan (Setagaya-Ku) - Mucoepidermoid carcinoma  
Spain (Provisa Medical Center) - Mucoepidermoid carcinoma  
The Netherlands, Amstelveen - Adenocarcinoma

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

Adenocarcinoma, lung  
T-28000, M-81403

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

Tse LA, Yu IS, Au JS, Qiu H, Wang XR. Silica dust, diesel exhaust, and painting work are the significant occupational risk factors for lung cancer in nonsmoking Chinese men. *Br J Cancer.* 2011; Jan 4;104(1):208-13. Epub 2010 Nov 23.

- Zhang T, Qin N, Li B. [Well-differentiated fetal adenocarcinoma of lung: a case report with 14 cases literature review]. *Zhongguo Fei Ai Za Zhi*. 2010; Aug 20;13(8):838-40. Review. Chinese.
- Park JA, Park HJ, Lee JS, Ha JO, Lee GK, Park BK, Ghim TT. Adenocarcinoma of lung in never smoked children. *Lung Cancer*. 2008; Aug;61(2):266-9. Epub 2008 Apr 3.
- Kwon MS, Shin SH, Yim SH, Lee KY, Kang HM, Kim TM, Chung YJ. CD63 as a biomarker for predicting the clinical outcomes in adenocarcinoma of lung. *Lung Cancer*. 2007; Jul;57(1):46-53. Epub 2007 Mar 12.
- Li Q, Bavikatty N, Michael CW. The role of immunohistochemistry in distinguishing squamous cell carcinoma from mesothelioma and adenocarcinoma in pleural effusion. *Semin Diagn Pathol*. 2006; Feb;23(1):15-9.
- Hsieh CC, Chow KC, Fahn HJ, Tsai CM, Li WY, Huang MH, Wang LS. Prognostic significance of HER-2/neu overexpression in stage I adenocarcinoma of lung. *Ann Thorac Surg*. 1998; Oct;66(4):1159-63; discussion 1163-4.

### Case No. 3, Accession No. 23611

March 2011

Carlsbad (Genopix Medical Laboratory) - Metastatic carcinoma, granulosa cell tumor  
Costa Mesa (College Hospital) - Neuroendocrine tumor, intermediate grade (WHO)  
Glendale - Carcinoid  
San Diego (Heartland Regional Medical Center) - Non-small cell carcinoma, poorly differentiated  
San Diego (Naval Medical Center) - Atypical carcinoid  
Florida (Munroe Regional Medical Center) - Neuroendocrine tumor  
Florida (Naples Pathology Associates) - Carcinoid tumor  
Georgia, Atlanta - Poorly differentiated non-small cell carcinoma; rule out metastasis  
Kansas (Coffeyville Regional Medical Center) - Paraganglioma, metastatic  
Kansas (Peterson Laboratory Services) - Hemangioendothelioma  
Massachusetts (BWH Pathology) - Sclerosing pneumocytoma  
Michigan (Henry Ford Hospital Residents) - Thymoma, epithelioid type  
New Mexico (The University of New Mexico) - Clear cell tumor  
New York (SUNY Downstate Medical Center Residents) - Atypical carcinoid  
New York (SUNY Stony Brook) - Atypical carcinoid  
New York (Westchester Medical Center) - Undifferentiated large cell carcinoma/mesothelioma  
Ohio, Columbus - Some sort of biphasic sarcoma  
Ohio (University of Toledo Medical Center) - Carcinoid, lung  
Pennsylvania (Conemaugh Valley Memorial Hospital) - Metastatic Sertoli-Leydig tumor  
Pennsylvania (Drexel University College of Medicine) - Atypical carcinoid  
Tennessee, Knoxville - Langerhans histiocytosis vs. chloroma (need stains)  
Texas, Crystal Beach - Neuroendocrine carcinoma, lung  
Texas, Lubbock - Atypical carcinoid  
Wisconsin (Medical Assessment of Consultation S.C.) - Malignant epithelioid hemangioendothelioma  
Wisconsin (St. Mary's Hospital) - Paraganglioma  
Australia (St. Vincents Hospital) - Large cell carcinoma, favor neuroendocrine  
Canada (Pasqua Hospital) - Atypical carcinoid with melanin  
Canada (University of Sherbrooke) - Solitary fibrous tumor vs. myoepithelioma  
England (John Radcliffe Hospital) - Metastatic adult granulosa cell tumor  
Ireland (University College Hospital Galway) - Carcinoid  
Japan (Asashi General Hospital) - Carcinoid tumor  
Japan (Setagaya-Ku) - Neuroendocrine carcinoma  
Spain (Provisa Medical Center) - Langerhans cell sarcoma  
The Netherlands, Amstelveen - Neuroendocrine carcinoma

### **Case 3 - Diagnosis:**

Atypical carcinoid tumor (neuroendocrine carcinoma), lung  
T-28000, M-82401

### **Case 3 - References:**

- Cao C, Yan TD, Kennedy C, Hendel N, Bannon PG, McCaughan BC. Bronchopulmonary carcinoid tumors: long-term outcomes after resection. *Ann Thorac Surg*. 2011; Feb;91(2):339-43.
- Stoll LM, Johnson MW, Burroughs F, Li QK. Cytologic diagnosis and differential diagnosis of lung carcinoid tumors a retrospective study of 63 Cases with histologic correlation. *Cancer Cytopathol*. 2010; Dec 25;118(6):457-67.
- Rekhtman N. Neuroendocrine tumors of the lung: an update. *Arch Pathol Lab Med* 2010; Nov;134(11):1628-38. Review.
- Tsuta K, Raso MG, Kalhor N, Liu DD, Wistuba II, Moran CA. Histologic features of low- and intermediate-grade neuroendocrine carcinoma (typical and atypical carcinoid tumors) of the lung. *Lung Cancer*. 2011; Jan;71(1):34-41. Epub 2010 May 11.
- Skov BG, Krasnik M, Lantuejoul S, Skov T, Brambilla E. Reclassification of neuroendocrine tumors improves the separation of carcinoids and the prediction of survival. *J Thorac Oncol*. 2008; Dec;3(12):1410-5.
- Bini A, Brandolini J, Cassanelli N, Davoli F, Dolci G, Sellitri F, Stella F. Typical and atypical pulmonary carcinoids: our institutional experience. *Interact Cardiovasc Thorac Surg*. 2008; May;7(3):415-8. Epub 2008 Mar 18.

### **Case No. 4, Accession No. 31250**

**March 2011**

Carlsbad (Genopix Medical Laboratory) - Large cell neuroendocrine carcinoma  
Costa Mesa (College Hospital) - Mixed squamous cell and neuroendocrine carcinoma, high grade WHO  
Glendale - Large cell neuroendocrine carcinoma  
San Diego (Heartland Regional Medical Center) - Squamous cell carcinoma, poorly differentiated, basaloid  
San Diego (Naval Medical Center) - Large cell NE carcinoma  
Florida (Munroe Regional Medical Center) - Large cell neuroendocrine carcinoma  
Florida (Naples Pathology Associates) - Undifferentiated large cell carcinoma  
Georgia, Atlanta - Squamous cell carcinoma with focal basaloid features  
Kansas (Coffeyville Regional Medical Center) - Adenocarcinoma  
Kansas (Peterson Laboratory Services) - Large cell neuroendocrine carcinoma  
Massachusetts (BWH Pathology) - Large cell neuroendocrine carcinoma  
New Mexico (The University of New Mexico) - Large cell neuroendocrine carcinoma  
New York (Buffalo General Hospital Residents) - Large cell neuroendocrine carcinoma  
New York (SUNY Downstate Medical Center Residents) - Large cell carcinoma with endocrine features  
New York (SUNY Stony Brook) - Non-small cell carcinoma, favor squamous  
New York (Westchester Medical Center) - Large cell neuroendocrine carcinoma consistent with squamous differentiation  
Ohio, Columbus - Large cell carcinoma with neuroendocrine differentiation  
Ohio (University of Toledo Medical Center) - Large cell neuroendocrine carcinoma, lung  
Pennsylvania (Conemaugh Valley Memorial Hospital) - Large cell neuroendocrine carcinoma  
Pennsylvania (Drexel University College of Medicine) - Basaloid carcinoma  
Tennessee, Knoxville - Mixes small cell carcinoma and squamous cell carcinoma  
Texas, Crystal Beach - Large cell carcinoma consistent with neuroendocrine differentiation  
Texas, Lubbock - Neuroendocrine carcinoma  
Wisconsin (Medical Assessment of Consultation S.C.) - Large cell neuroendocrine carcinoma  
Wisconsin (St. Mary's Hospital) - Squamous cell carcinoma  
Australia (St. Vincents Hospital) - Squamous cell carcinoma  
Canada (Pasqua Hospital) - Squamous cell carcinoma  
Canada (University of Sherbrooke) - Neuroendocrine carcinoma, large cell

England (John Radcliffe Hospital) - Combine large cell neuroendocrine carcinoma  
Ireland (University College Hospital Galway) - Basaloid carcinoma  
Japan (Asashi General Hospital) - Large cell neuroendocrine carcinoma  
Japan (Setagaya-Ku) - Large cell neuroendocrine carcinoma  
Spain (Provisa Medical Center) - Large cell carcinoma, basaloid carcinoma  
The Netherlands, Amstelveen - Squamous cell carcinoma with neuroendocrine differentiation

**Case 4 - Diagnosis:**

Large cell neuroendocrine carcinoma, lung  
T-28000, M-80123

Directors note: Several sets also showed a small cell component (drc)

**Case 4 - References:**

Naranjo Gómez JM, Gómez Román JJ. Behaviour and survival of high-grade neuroendocrine carcinomas of the lung. *Respir Med.* 2010; Dec;104(12):1929-36.

Travis WD. Advances in neuroendocrine lung tumors. *Ann Oncol.* 2010; Oct;21 Suppl 7:vii65-vii71.

Gollard R, Jhatakia S, Elliott M, Kosty M. Large cell/neuroendocrine carcinoma. *Lung Cancer.* 2010; Jul;69(1):13-8. Epub 2010; Feb 4. Review.

Sun L, Sakurai S, Sano T, Hironaka M, Kawashima O, Nakajima T. High-grade neuroendocrine carcinoma of the lung: comparative clinicopathological study of large cell neuroendocrine carcinoma and small cell lung carcinoma. *Pathol Int.* 2009; Aug;59(8):522-9.

Pardo J, Martinez-Peñuela AM, Sola JJ, Panizo A, Gúrpide A, Martinez-Peñuela JM, Lozano MD. Large cell carcinoma of the lung: an endangered species? *Appl Immunohistochem Mol Morphol.* 2009; Oct;17(5):383-92.

**Case No. 5, Accession No. 31062**

**March 2011**

Carlsbad (Genopix Medical Laboratory) - Solitary fibrous tumor  
Costa Mesa (College Hospital) - Hamartoma  
Glendale - Solitary fibrous tumor  
San Diego (Heartland Regional Medical Center) - Solitary fibrous tumor  
San Diego (Naval Medical Center) - Solitary fibrous tumor  
Florida (Munroe Regional Medical Center) - Solitary fibrous tumor  
Florida (Naples Pathology Associates) - Solitary fibrous tumor  
Georgia, Atlanta - Solitary fibrous tumor  
Kansas (Coffeyville Regional Medical Center) - Angiosarcoma  
Kansas (Peterson Laboratory Services) - Solitary fibrous tumor  
Massachusetts (BWH Pathology) - Solitary fibrous tumor  
New Mexico (The University of New Mexico) - Solitary fibrous tumor  
New York (Buffalo General Hospital Residents) - Hemangiopericytoma  
New York (SUNY Downstate Medical Center Residents) - Solitary fibrous tumor  
New York (SUNY Stony Brook) - Sclerosing hemangioma vs. solitary fibrous tumor  
New York (Westchester Medical Center) - Adenofibroma of the lung  
Ohio, Columbus - Angiosarcoma  
Ohio (University of Toledo Medical Center) - Solitary fibrous tumor, lung  
Pennsylvania (Conemaugh Valley Memorial Hospital) - Solitary fibrous tumor  
Pennsylvania (Drexel University College of Medicine) - Solitary fibrous tumor  
Tennessee, Knoxville - Solitary fibrous tumor  
Texas, Crystal Beach - Solitary fibrous tumor  
Texas, Lubbock - Solitary fibrous tumor  
Wisconsin (Medical Assessment of Consultation S.C.) - Solitary fibrous tumor of lung

Wisconsin (St. Mary's Hospital) - Solitary fibrous tumor  
Australia (St. Vincents Hospital) - Solitary fibrous tumor  
Canada (Pasqua Hospital) - Solitary fibrous tumor  
Canada (University of Sherbrooke) - Sclerosing hemangioma  
England (John Radcliffe Hospital) - Solitary fibrous tumor  
Ireland (University College Hospital Galway) - Solitary fibrous tumor  
Japan (Asashi General Hospital) - Sclerosing hemangioma  
Japan (Setagaya-Ku) - Sclerosing hemangioma  
Spain (Provisa Medical Center) - Solitary fibrous tumor  
The Netherlands, Amstelveen - Solitary fibrous tumor

#### **Case 5 - Diagnosis:**

Solitary fibrous tumor, lung  
 T-28000, M-80000

#### **Case 5 - References:**

Kawaguchi K, Taniguchi T, Usami N, Yokoi K. Intrapulmonary solitary fibrous tumor. *Gen Thorac Cardiovasc Surg.* 2011; Jan;59(1):61-4. Epub 2011; Jan 12. PubMed.

Travis WD. Sarcomatoid neoplasms of the lung and pleura. *Arch Pathol Lab Med* 2010; Nov;134(11):1645-58. Review.

Kouki HS, Koletsis EN, Zolota V, Prokakis C, Apostolakis E, Dougenis D. Solitary fibrous tumor of the lung. *Gen Thorac Cardiovasc Surg.* 2008; May;56(5):249-51. Epub 2008 May 11.

Sironi M, Rho B, Spinelli M. Adenofibromatous pattern in a solitary fibrous tumor of the lung. *Int J Surg Pathol* 2005; Jan;13(1):79.

Butnor KJ, Burchette JL, Sporn TA, Hammar SP, Roggli VL. The spectrum of Kit (CD117) immunoreactivity in lung and pleural tumors: a study of 96 cases using a single-source antibody with a review of the literature. *Arch Pathol Lab Med.* 2004; May;128(5):538-43. Review.

Weynand B, Collard P, Galant C. Cytopathological features of solitary fibrous tumor of the pleura: a study of 5 cases. *Diagn Cytopathol.* 1998; Feb;18(2):118-24.

#### **Case No. 6, Accession No. 30501**

**March 2011**

Carlsbad (Genopix Medical Laboratory) - Monophasic synovial sarcoma  
Costa Mesa (College Hospital) - Sarcomatoid carcinoma  
Glendale - Monophasic synovial sarcoma  
San Diego (Heartland Regional Medical Center) - Synovial sarcoma  
San Diego (Naval Medical Center) - Synovial sarcoma, monophasic  
Florida (Munroe Regional Medical Center) - Spindle cell carcinoma  
Florida (Naples Pathology Associates) - Monophasic synovial sarcoma  
Georgia, Atlanta - Monophasic synovial sarcoma  
Kansas (Coffeyville Regional Medical Center) - Spindle cell carcinoma  
Kansas (Peterson Laboratory Services) - Synovial sarcoma  
Massachusetts (BWH Pathology) - Spindle cell carcinoma  
New Mexico (The University of New Mexico) - Synovial sarcoma  
New York (Buffalo General Hospital Residents) - Synovial sarcoma  
New York (SUNY Downstate Medical Center Residents) - Synovial sarcoma  
New York (SUNY Stony Brook) - Monophasic synovial sarcoma  
New York (Westchester Medical Center) - Monophasic synovial sarcoma  
Ohio, Columbus - Sarcomatoid (spindle cell) carcinoma  
Ohio (University of Toledo Medical Center) - Synovial sarcoma, lung  
Pennsylvania (Conemaugh Valley Memorial Hospital) - Synovial sarcoma



Pennsylvania (Drexel University College of Medicine) - Spindle cell carcinoma  
Tennessee, Knoxville - Synovial sarcoma  
Texas, Crystal Beach - Mesothelioma epithelioid, spindly  
Texas, Lubbock - Monophasic synoviosarcoma  
Wisconsin (Medical Assessment of Consultation S.C.) - Pulmonary involvement by synovial sarcoma  
Wisconsin (St. Mary's Hospital) - Synovial sarcoma  
Australia (St. Vincents Hospital) - Synovial sarcoma  
Canada (Pasqua Hospital) - Synovial sarcoma  
Canada (University of Sherbrooke) - Synoviosarcoma, spindle cell  
England (John Radcliffe Hospital) - Synovial sarcoma, monophasic  
Ireland (University College Hospital Galway) - Pulmonary synovial sarcoma  
Japan (Asahi General Hospital) - Pulmonary synovial sarcoma  
Japan (Setagaya-Ku) - Synovial sarcoma  
Spain (Provisa Medical Center) - Synovial sarcoma  
The Netherlands, Amstelveen - Synoviosarcoma

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

Monophasic synovial sarcoma (spindle cell variant), lung  
 T-28000, M-90403

#### **Case 6 - References:**

Askin FB, Argani P. Pulmonary synovial sarcoma and pneumothorax. *Am J Surg Pathol.* 2011; Feb;35(2):311; author reply 311.  
  
 Cummings NM, Desai S, Thway K, Stewart S, Hill DA, Priest JR, Nicholson AG, Rintoul RC. Cystic primary pulmonary synovial sarcoma presenting as recurrent pneumothorax: report of 4 cases. *Am J Surg Pathol.* 2010; Aug;34(8):1176-9.  
  
 Teo A, Hemmings C, Miller R. Sarcomatoid localized mesothelioma mimicking intrapulmonary synovial sarcoma: a case report and review of the literature. *Pathology.* 2010; Feb;42(2):182-4.  
  
 Bégin LR. Critical commentary to: Primary poorly differentiated monophasic synovial sarcoma of the lung. *Pathol Res Pract.* 2003;199(12):835-6.  
  
 Okamoto S, Hisaoka M, Daa T, Hatakeyama K, Iwamasa T, Hashimoto H. Primary pulmonary synovial sarcoma: a clinicopathologic, immunohistochemical, and molecular study of 11 cases. *Hum Pathol.* 2004; Jul;35(7):850-6.

#### **Case No. 7, Accession No. 31020**

**March 2011**

Carlsbad (Genopix Medical Laboratory) - Thymoma  
Costa Mesa (College Hospital) - Thymoma  
Glendale - Epithelial-rich thymoma  
San Diego (Heartland Regional Medical Center) - Thymoma, type A  
San Diego (Naval Medical Center) - Thymoma  
Florida (Munroe Regional Medical Center) - Thymoma  
Florida (Naples Pathology Associates) - Thymoma, type A  
Georgia, Atlanta - Thymoma, type A pattern  
Kansas (Coffeyville Regional Medical Center) - Thymoma  
Kansas (Peterson Laboratory Services) - Thymoma, invasive  
Massachusetts (BWH Pathology) - Squamous cell thymic carcinoma, non-keratinizing  
New Mexico (The University of New Mexico) - Thymoma, type A  
New York (Buffalo General Hospital Residents) - Thymoma, AB type  
New York (SUNY Downstate Medical Center Residents) - Thymoma, WHO type A  
New York (SUNY Stony Brook) - Thymoma, type A  
New York (Westchester Medical Center) - Thymoma, type AB

Ohio, Columbus - Thymoma, type A  
Ohio (University of Toledo Medical Center) - Invasive thymoma, type A, mediastinum  
Pennsylvania (Conemaugh Valley Memorial Hospital) - Thymoma, type A  
Pennsylvania (Drexel University College of Medicine) - Thymoma, type A  
Tennessee, Knoxville - Type AB thymoma  
Texas, Crystal Beach - Thymoma, epithelial and lymphocytic  
Texas, Lubbock - Thymoma  
Wisconsin (Medical Assessment of Consultation S.C.) - Spindle cell thymoma with pseudo rosette formation  
Wisconsin (St. Mary's Hospital) - Thymoma, type A  
Australia (St. Vincents Hospital) - Minimally invasive thymoma, type AB  
Canada (Pasqua Hospital) - Thymoma  
Canada (University of Sherbrooke) - Thymoma AB  
England (John Radcliffe Hospital) - Thymoma, type A  
Ireland (University College Hospital Galway) - Thymoma, type A  
Japan (Asashi General Hospital) - Metaplastic thymoma  
Japan (Setagaya-Ku) - Thymoma  
Spain (Provisa Medical Center) - Thymoma, type A  
The Netherlands, Amstelveen - Invasive thymoma and glandular differentiation

#### **Case 7 - Diagnosis:**

Spindle cell thymoma, WHO type A, mediastinum  
 T-Y2300, M-85800

**Consultation:** Dr. Saul Suster, Medical College of Wisconsin: "Spindle cell thymoma, WHO type A, no invasion seen."

#### **Case 7 - References:**

- Kalhor N, Suster S, Moran CA. Spindle cell thymomas (WHO Type A) with prominent papillary and pseudopapillary features: a clinicopathologic and immunohistochemical study of 10 cases. *Am J Surg Pathol.* 2011; Mar;35(3):372-7.  
 Jain RK, Mehta RJ, Henley JD, Kesler KA, Loehrer PJ, Badve S. WHO types A and AB thymomas: not always benign. *Mod Pathol.* 2010; Dec;23(12):1641-9. Epub 2010 Sep 10.  
 Jiao X, Yin HL, Lu ZF, Zhao YC, Zhou XJ. [Histologic subtyping and prognosis of thymoma: a study of 108 cases]. *Zhonghua Bing Li Xue Za Zhi.* 2008; Jul;37(7):445-9. Chinese.  
 Takeda S, Koma M, Maeda H. Huge thymoma: role of preoperative WHO histological classification. *Interact Cardiovasc Thorac Surg.* 2008; Dec;7(6):1196-8. Epub 2008; Aug 19.  
 Azad NS, Ahmad Z, Ahsan A, Fatimi S, Ahmed R, Kayani N, Pervez S, Hasan SH. Thymoma : a clinicopathologic association of world health organization histologic subtype and invasive behavior. *J Coll Physicians Surg Pak.* 2007; Nov;17(11):658-61.

#### **Case No. 8, Accession No. 30661**

**March 2011**

Carlsbad (Genopix Medical Laboratory) - Atypical thymoma  
Costa Mesa (College Hospital) - Thymoma  
Glendale - Epithelial-rich thymoma  
San Diego (Heartland Regional Medical Center) - Thymoma, type AB  
San Diego (Naval Medical Center) - Thymoma  
Florida (Munroe Regional Medical Center) - Schwannoma  
Florida (Naples Pathology Associates) - Thymoma, type AB  
Georgia, Atlanta - Thymoma, type AB  
Kansas (Coffeyville Regional Medical Center) - Thymoma  
Kansas (Peterson Laboratory Services) - Thymoma

Massachusetts (BWH Pathology) - Thymoma, WHO type A  
New Mexico (The University of New Mexico) - Thymoma, type AB  
New York (Buffalo General Hospital Residents) - Thymoma, A type  
New York (SUNY Downstate Medical Center Residents) - Thymoma WHO, type AB  
New York (SUNY Stony Brook) - Thymoma, type AB  
New York (Westchester Medical Center) - Thymoma, type A  
Ohio, Columbus - Thymoma, type A  
Ohio (University of Toledo Medical Center) - Thymoma, type AB, mediastinum  
Pennsylvania (Conemaugh Valley Memorial Hospital) - Thymoma, type B3  
Pennsylvania (Drexel University College of Medicine) - Thymoma, type AB  
Tennessee, Knoxville - Thymoma, type A  
Texas, Crystal Beach - Thymoma  
Texas, Lubbock - Thymoma  
Wisconsin (Medical Assessment of Consultation S.C.) - Mixed spindle cell/lymphocytic thymoma  
Wisconsin (St. Mary's Hospital) - Thymoma, type AB  
Australia (St. Vincents Hospital) - Thymoma, type A  
Canada (Pasqua Hospital) - Thymoma  
Canada (University of Sherbrooke) - Thymoma A  
England (John Radcliffe Hospital) - Thymoma, type AB  
Ireland (University College Hospital Galway) - Thymoma, type AB  
Japan (Asashi General Hospital) - Thymoma, type AB  
Japan (Setagaya-Ku) - Thymoma  
Spain (Provisa Medical Center) - Thymoma, type AB  
The Netherlands, Amstelveen - Type A and B2 thymoma

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

Thymoma, favor WHO type A, mediastinum  
 T-Y2300, M-85803

#### **Case 8 - References:**

See references on Case #7

### **Case No. 9, Accession No. 31205**

**March 2011**

Carlsbad (Genopix Medical Laboratory) - Lymphoblastic lymphoma  
Costa Mesa (College Hospital) - Malignant lymphoma, small cell  
Glendale - Lymphocyte-rich thymoma  
San Diego (Heartland Regional Medical Center) - Thymoma, type B1  
San Diego (Naval Medical Center) - Thymoma, type B1  
Florida (Munroe Regional Medical Center) - Lymphocytic thymoma  
Florida (Naples Pathology Associates) - Thymoma, type B1  
Georgia, Atlanta - Thymoma, type B pattern  
Kansas (Coffeyville Regional Medical Center) - Lymphocyte predominant thymoma  
Kansas (Peterson Laboratory Services) - Thymoma, type B  
Massachusetts (BWH Pathology) - Thymoma, WHO type B1  
New Mexico (The University of New Mexico) - Thymoma, type B1  
New York (Buffalo General Hospital Residents) - Thymic hyperplasia  
New York (SUNY Downstate Medical Center Residents) - Thymoma, WHO type B1  
New York (SUNY Stony Brook) - Thymoma, type B1  
New York (Westchester Medical Center) - Thymoma, type B1  
Ohio, Columbus - Thymoma, type B1  
Ohio (University of Toledo Medical Center) - Thymoma, type B1, mediastinum  
Pennsylvania (Conemaugh Valley Memorial Hospital) - Thymoma, type B1  
Pennsylvania (Drexel University College of Medicine) - Thymoma, type B1

Tennessee, Knoxville - Thymoma, type B1  
Texas, Crystal Beach - Lymphocytic thymoma  
Texas, Lubbock - Large cell lymphoma  
Wisconsin (Medical Assessment of Consultation S.C.) - Lymphocyte-rich thymoma  
Wisconsin (St. Mary's Hospital) - Thymoma, type B1 lymphocyte-rich thymoma  
Australia (St. Vincents Hospital) - Thymoma, type B1, invasive  
Canada (Pasqua Hospital) - Thymoma  
Canada (University of Sherbrooke) - Thymoma, type C  
England (John Radcliffe Hospital) - Thymoma, type B1  
Ireland (University College Hospital Galway) - Thymoma, type B1  
Japan (Asashi General Hospital) - Thymoma, type B1  
Japan (Setagaya-Ku) - Malignant lymphoma  
Spain (Provisa Medical Center) - Thymoma, type B1  
The Netherlands, Amstelveen - Thymoma, type B1

#### **Case 9 - Diagnosis:**

Thymoma, WHO type B1, mediastinum  
 T-98020, M-85800

#### **Case 9 - References:**

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#### **Case No. 10, Accession No. 30113**

**March 2011**

Carlsbad (Genopix Medical Laboratory) - Biphasic synovial sarcoma  
Costa Mesa (College Hospital) - Carcinoid  
Glendale - Thymic carcinoma  
San Diego (Heartland Regional Medical Center) - Thymic carcinoma  
San Diego (Naval Medical Center) - Thymic carcinoma  
Florida (Munroe Regional Medical Center) - Paraganglioma  
Florida (Naples Pathology Associates) - Thymic carcinoma  
Georgia, Atlanta - Thymic carcinoma

Kansas (Coffeyville Regional Medical Center) - Thymic carcinoid  
Kansas (Peterson Laboratory Services) - Thymic carcinoma  
Massachusetts (BWH Pathology) - Neuroendocrine carcinoma, well-differentiated  
New Mexico (The University of New Mexico) - Epithelioid mesothelioma  
New York (Buffalo General Hospital Residents) - Adenoid cystic carcinoma  
New York (SUNY Downstate Medical Center Residents) - Atypical carcinoid, thymic carcinoma  
New York (SUNY Stony Brook) - Invasive carcinoma with neuroendocrine features  
New York (Westchester Medical Center) - Neuroendocrine carcinoma  
Ohio, Columbus - Thymic carcinoma  
Ohio (University of Toledo Medical Center) - Thymic neuroendocrine carcinoma, mediastinum  
Pennsylvania (Conemaugh Valley Memorial Hospital) - Thymic carcinoma  
Pennsylvania (Drexel University College of Medicine) - Thymic carcinoma  
Tennessee, Knoxville - Atypical carcinoid  
Texas, Crystal Beach - Carcinoma, large cell (intermediate) consistent with squamous differentiation  
Texas, Lubbock - Dysgerminoma  
Wisconsin (Medical Assessment of Consultation S.C.) - Thymic carcinoma  
Wisconsin (St. Mary's Hospital) - Thymic carcinoma  
Australia (St. Vincents Hospital) - Neuroendocrine carcinoma, atypical carcinoid  
Canada (Pasqua Hospital) - Atypical carcinoid of the thymus  
Canada (University of Sherbrooke) - Thymic carcinoma  
Ireland (University College Hospital Galway) - Medullary carcinoma, thyroid  
Japan (Asashi General Hospital) - Clear cell carcinoma  
Japan (Setagaya-Ku) - Thymic carcinoma  
Spain (Provisa Medical Center) - Poorly differentiated neuroendocrine carcinoma  
The Netherlands, Amstelveen - Thymic carcinoma

#### **Case 10 - Diagnosis:**

Thymic carcinoma (malignant thymoma, WHO type C), mediastinum  
 T-Y2300, M-85800

#### **Case 10 - References:**

- Chalabreysse L, Roy P, Cordier JF, Loire R, Gamondes JP, Thivolet-Bejui F. Correlation of the WHO schema for the classification of thymic epithelial neoplasms with prognosis: a retrospective study of 90 tumors. *Am J Surg Pathol.* 2002; Dec;26(12):1605-11.
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