

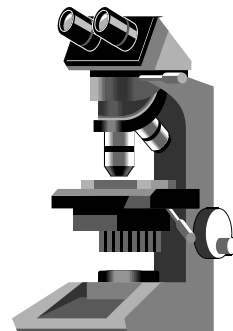


CALIFORNIA  
TUMOR TISSUE REGISTRY

## *ENDOCRINE PATHOLOGY*

Minutes – Subscription A

February 2001



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

Death from Thyroid Cancer of Follicular Cell Origin. Wu Hurng-Sheng, Young Michael T, Ituarte Philip HG, et al. *J Am College Surg* 2000;191(6):600-606.

The History of Parathyroid Surgery 1850-1996. The Excelsior Surgical Society 1998. Edward D Churchill Lecture. Organ CH, Jr. *J Am College Surg* 2000; 191(1):284.

The Pharmaceutical Industry. To Whom Is It Accountable? Angell, M. *New Eng J of Med* 2000;342(25):1902-1904.

In Search of the Origins of Modern Surgical Pathology. Gal AA. *Adv in Anat Pathol* 2001; 8(1):1-13.

Predicting the Future. A Critical Appraisal of Cancer Prognosis Studies. Hall PA. *Histopathol* 1999; 35:489-494.

Mucin and Colorectal Cancer Metastasis. Niv Yaron. *Am J of Gastroenterol* 1994; 89(5):665-669.

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## **FILE DIAGNOSES**

**CTTR Subscription A**

**February 2001**

**Case 1:**

**Pheochromocytoma, adrenal gland**  
T-93000, M-87000

**Case 2:**

**Adrenal cortical adenoma with cellular atypia (“atypical adenoma”)**  
T-93000, M-81400

**Case 3:**

**Pheochromocytoma, adrenal**  
T-93000, M-87000

**Case 4:**

**Adrenal cortical carcinoma**  
T-93000, M-83703

**Case 5:**

**Metastatic melanoma, adrenal**  
T-93000, M-87203

**Case 6:**

**Solid pseudopapillary tumor with neuroendocrine differentiation**  
T-Y4600, D-2040

**Case 7:**

**Minimally invasive Hurthle cell carcinoma, thyroid**  
T-96000, M-82903

**Case 8:**

**Medullary carcinoma, thyroid**  
T-96000, M-85103

**Case 9:**

**Hyalinizing trabecular carcinoma, thyroid**  
T-96000, M-81903

**Case 10:**

**Papillary carcinoma, thyroid**  
T-96000, M-80503

Bakersfield - Pheochromocytoma  
Bay Area - Pheochromocytoma (3)  
Hayward/Fremont - Pheochromocytoma  
Loma Linda Residents - Pheochromocytoma (5); Adrenal medullary hyperplasia (2)  
Long Beach - Pheochromocytoma (7)  
Los Angeles UCLA Residents - Pheochromocytoma  
Monterey (Community Hospital of Monterey Peninsula) - Pheochromocytoma  
Monterey Park (Garfield Medical Center) - Pheochromocytoma  
Mountain View (El Camino Pathology Group) - Pheochromocytoma  
Oakland (Kaiser) - Pheochromocytoma (4)  
Orange (UCI Medical Center) - Pheochromocytoma  
Sacramento (UC Davis) - Pheochromocytoma (7)  
San Diego (Naval Medical Center) - Pheochromocytoma  
Santa Clara (Santa Clara Valley) - Pheochromocytoma (6)  
Santa Rosa (Santa Rosa Memorial Hospital) - Pheochromocytoma (3)  
Ventura (Unilab) - Pheochromocytoma (2)  
Alaska (Anchorage) - Pheochromocytoma  
Florida (Monroe Regional Medical Center) - Pheochromocytoma  
Florida (Winter Haven Hospital) - Pheochromocytoma (2)  
Florida (Tallahassee) - Pheochromocytoma (3)  
Illinois (Burr Ridge) - Pheochromocytoma  
Illinois (Cook County Hospital Residents) - Pheochromocytoma  
Illinois (DuPage Pathology Associates) - Pheochromocytoma (2)  
Indiana (Fort Wayne) - Pheochromocytoma, right adrenal gland  
Kentucky (University of Louisville Residents) - Pheochromocytoma  
Louisiana (Louisiana State University Medical Center) - Pheochromocytoma  
Louisiana (Tulane University Medical Center) - Pheochromocytoma, adrenal  
Maryland (Woodbine) - Pheochromocytoma (2)  
Maryland (National Naval Medical Center) - Pheochromocytoma (9)  
Maryland (University of Maryland) - Pheochromocytoma  
Maryland (Johns Hopkins Hospital Residents) - Pheochromocytoma  
Massachusetts (New England Medical Center Residents) - Pheochromocytoma  
Massachusetts (Berkshire Medical Center) - Pheochromocytoma  
Michigan (St. Joseph Mercy Hospital) - Pheochromocytoma  
Michigan (Oakwood Hospital) - Pheochromocytoma  
Nebraska (Creighton University School of Medicine) - Pheochromocytoma (non-functional)  
New Jersey (Overlook Hospital) - Pheochromocytoma (3)  
New York (SUNY Stony Brook University Hospital Residents) - Pheochromocytoma (10)  
New York (Impath) - Pheochromocytoma  
New York (Long Island Jewish Medical Center) - Pheochromocytoma  
New York (DVAMC, Northport) - Pheochromocytoma  
New York (Beth Israel Medical Center Residents) - Pheochromocytoma  
North Carolina (Wake Forest University Residents) - Pheochromocytoma  
Ohio (Worthington) - Pheochromocytoma  
Oklahoma (South Tulsa) - Pheochromocytoma  
Pennsylvania (Lehigh Valley Hospital) - Pheochromocytoma  
Pennsylvania (Conemaugh Medical Center Residents) - Pheochromocytoma  
Pennsylvania (Allegheny General Hospital) - Pheochromocytoma  
Wisconsin (Meriter Health Services) - Pheochromocytoma  
Australia (Royal Prince Alfred Hospital) - Pheochromocytoma

Australia (North Queensland Pathology Group) - Pheochromocytoma  
Canada (Foothills Hospital) - Pheochromocytoma  
Japan (Kyoto Prefectural University of Medicine) - Pheochromocytoma (3); Adrenal cortical nodule (or adenoma) with eucorticalism (1)  
Japan (Kawasaki Medical School) - Pheochromocytoma  
Puerto Rico (Porto-Portugal Group) - Pheochromocytoma  
Saudi Arabia (King Khalid University Hospital Study Group) - Pheochromocytoma  
Singapore - Pheochromocytoma

#### **CASE 1 - DIAGNOSIS:**

##### **Pheochromocytoma, adrenal gland**

T-93000, M-87000

#### **CASE 1 - REFERENCES:**

Werbel SS and Ober KP. Pheochromocytoma. Update on Diagnosis, Localization and Management. *Med Clin North Am* 1995; 79(1):131-153.  
 Komminoth P, Roth , Schroder S, et al. Overlapping Expression of Immunohistochemical Markers and Synaptophysin mRNA in Pheochromocytomas and Adrenocortical Carcinomas. Implications for the Differential Diagnosis of Adrenal Gland Tumors. *Lab Invest* 1995; 72(4):424-431.  
 Alsabeh R, Mazoujian G, Goates J, et al. Adrenal Cortical Tumors Clinically Mimicking Pheochromocytoma. *Am J Clin Pathol* 1995; 104(4):382-390.  
 Nativ O, Grant CS, Sheps SC, et al. The Clinical Significance of Nuclear DNA Ploidy Pattern in 184 Patients with Pheochromocytoma. *Cancer* 1992; 69(11):2683-2687.

#### **Case No. 2, Accession No. 27988**

**February 2001**

Bakersfield - Adrenal cortical carcinoma  
Bay Area - Adrenal cortical carcinoma (3)  
Hayward/Fremont - Adrenal cortical neoplasm, potentially malignant  
Loma Linda Residents - Adrenocortical carcinoma (7)  
Long Beach - Adrenal cortical adenoma (7)  
Los Angeles UCLA Residents - Adrenal cortical carcinoma  
Monterey (Community Hospital of Monterey Peninsula) - Adrenal cortical adenoma  
Monterey Park (Garfield Medical Center) - Adrenal cortical adenoma  
Mountain View (El Camino Pathology Group) - Adrenal cortical adenoma  
Oakland (Kaiser) - Adrenal cortical adenoma (4)  
Orange (UCI Medical Center) - Borderline cortical neoplasm in a (pediatric patient)  
Sacramento (UC Davis) - Adrenal cortical carcinoma (7)  
San Diego (Naval Medical Center) - Pediatric adrenal cortical neoplasm; favor NOS (8); Favor carcinoma (2); Favor adenoma (1)  
Santa Clara (Santa Clara Valley) - Adrenal cortical carcinoma (6)  
Santa Rosa (Santa Rosa Memorial Hospital) - Adrenocortical tumor—favor carcinoma based on weight (3)  
Ventura (Unilab) - Adrenal cortical carcinoma (2)  
Alaska (Anchorage) - Adrenal cortical adenoma  
Florida (Monroe Regional Medical Center) - Adrenal cortical carcinoma  
Florida (Winter Haven Hospital) - Adrenocortical adenoma (1); Adenoma (1)  
Florida (Tallahassee) - Adrenal adenoma (1); Adrenal cortical tumor of uncertain metastatic potential (2)  
Illinois (Burr Ridge) - Cortical adenoma  
Illinois (Cook County Hospital Residents) - Adrenal cortical adenoma  
Illinois (DuPage Pathology Associates) - Adrenal cortical adenoma (2)  
Indiana (Fort Wayne) - Adrenal cortical adenoma, left adrenal gland with cytologic atypia  
Kentucky (University of Louisville Residents) - Adrenal cortical carcinoma  
Louisiana (Louisiana State University Medical Center) - Adrenal cortical adenoma  
Louisiana (Tulane University Medical Center) - Pheochromocytoma, adrenal

Maryland (Woodbine) - Adrenal cortical carcinoma (2)  
Maryland (National Naval Medical Center) - Adrenal adenoma (6); Adrenal neoplasm of uncertain malignant potential (3)  
Maryland (University of Maryland) - Adrenocortical carcinoma  
Maryland (Johns Hopkins Hospital Residents) - Adrenal cortical neoplasm, atypical adenoma vs. well-differentiated carcinoma (concerned about size of lesion)  
Massachusetts (New England Medical Center Residents) - Adrenal cortical neoplasm, probably benign  
Massachusetts (Berkshire Medical Center) - Adrenal cortical adenoma (2); vs. carcinoma (5)  
Michigan (St. Joseph Mercy Hospital) - Adrenal cortical carcinoma  
Michigan (Oakwood Hospital) - Adrenocortical adenoma  
Nebraska (Creighton University School of Medicine) - Adenoma, cortical  
New Jersey (Overlook Hospital) - Adrenal cortical neoplasm of uncertain biological potential (3)  
New York (SUNY Stony Brook University Hospital Residents) - Adrenocortical carcinoma (10)  
New York (Impath) - Adrenal adenoma  
New York (Long Island Jewish Medical Center) - Adrenal cortical tumor, uncertain malignant potential  
New York (DVAMC, Northport) - Adrenal cortical neoplasm favor carcinoma  
New York (Beth Israel Medical Center Residents) - Adrenal cortical adenoma  
North Carolina (Wake Forest University Residents) - Adrenal cortical adenoma  
Ohio (Worthington) - Adrenal cortical carcinoma  
Oklahoma (South Tulsa) - Adrenal cortical adenoma  
Pennsylvania (Lehigh Valley Hospital) - Adrenal cortical neoplasm  
Pennsylvania (Conemaugh Medical Center Residents) - Adrenal cortical carcinoma  
Pennsylvania (Allegheny General Hospital) - Adrenal cortical carcinoma  
Wisconsin (Meriter Health Services) - Adrenocortical carcinoma  
Australia (Royal Prince Alfred Hospital) - Adrenal cortical adenoma  
Australia (North Queensland Pathology Group) - Adrenal cortical adenoma  
Canada (Foothills Hospital) - Adrenocortical neoplasm, cannot exclude carcinoma  
Japan (Kyoto Prefectural University of Medicine) - Cortical adenoma (4)  
Japan (Kawasaki Medical School) - Adrenocortical carcinoma  
Puerto Rico (Porto-Portugal Group) - Adrenal cortical carcinoma  
Saudi Arabia (King Khalid University Hospital Study Group) - Adrenal cortical carcinoma  
Singapore - Cortical carcinoma

## **CASE 2 - DIAGNOSIS:**

**Adrenal cortical adenoma with cellular atypia (“atypical adenoma”)**

T-93000, M-81400

## **CASE 2 - REFERENCES:**

Hough AJ, Hollifield JW, Page DL, et al. Prognostic Factors in Adrenal Cortical Tumors. A Mathematical Analysis of Clinical Morphologic Data. *Am J Clin Pathol* 1979; 72(3):390-399.  
 Cibas ES, Medeiros LJ, Weinberg DS, et al. Cellular DNA Profiles of Benign and Malignant Adrenocortical Tumors. *Am J Surg Pathol* 1990; 14(10):948-955.

**Case No. 3, Accession No. 28648**

**February 2001**

Bakersfield - Adrenal cortical carcinoma  
Bay Area - Adrenal cortical carcinoma (3)  
Hayward/Fremont - Pheochromocytoma  
Loma Linda Residents - Pheochromocytoma (7)  
Long Beach - Pheochromocytoma (7)  
Los Angeles UCLA Residents - Pheochromocytoma  
Monterey (Community Hospital of Monterey Peninsula) - Pheochromocytoma  
Monterey Park (Garfield Medical Center) - Pheochromocytoma

Mountain View (El Camino Pathology Group) - Pheochromocytoma  
Oakland (Kaiser) - Pheochromocytoma (4)  
Orange (UCI Medical Center) - Pheochromocytoma  
Sacramento (UC Davis) - Pheochromocytoma (7)  
San Diego (Naval Medical Center) - Pheochromocytoma  
Santa Clara (Santa Clara Valley) - Pheochromocytoma (6)  
Santa Rosa (Santa Rosa Memorial Hospital) - Pheochromocytoma  
Ventura (Unilab) - Pheochromocytoma (2)  
Alaska (Anchorage) - Pheochromocytoma  
Florida (Monroe Regional Medical Center) - Paraganglioma  
Florida (Winter Haven Hospital) - Pheochromocytoma (2)  
Florida (Tallahassee) - Pheochromocytoma (3)  
Illinois (Burr Ridge) - Adenoma with oncocytoid features  
Illinois (Cook County Hospital Residents) - Pheochromocytoma  
Illinois (DuPage Pathology Associates) - Pheochromocytoma (1); Adrenal cortical adenoma (vs. pheochromocytoma?) (1)  
Indiana (Fort Wayne) - Pheochromocytoma, right adrenal gland  
Kentucky (University of Louisville Residents) - Paraganglioma  
Louisiana (Louisiana State University Medical Center) - Pheochromocytoma  
Louisiana (Tulane University Medical Center) - Pheochromocytoma, adrenal  
Maryland (Woodbine) - Pheochromocytoma (2)  
Maryland (National Naval Medical Center) - Pheochromocytoma (9)  
Maryland (University of Maryland) - Pheochromocytoma  
Maryland (Johns Hopkins Hospital Residents) - Pheochromocytoma  
Massachusetts (New England Medical Center Residents) - Pheochromocytoma  
Massachusetts (Berkshire Medical Center) - Pheochromocytoma  
Michigan (St. Joseph Mercy Hospital) - Pheochromocytoma  
Michigan (Oakwood Hospital) - Pheochromocytoma  
Nebraska (Creighton University School of Medicine) - Adrenal neoplasm (favor medullary origin)  
New Jersey (Overlook Hospital) - Pheochromocytoma  
New York (SUNY Stony Brook University Hospital Residents) - Pheochromocytoma (10)  
New York (Impath) - Pheochromocytoma  
New York (Long Island Jewish Medical Center) - Pheochromocytoma  
New York (DVAMC, Northport) - Pheochromocytoma  
New York (Beth Israel Medical Center Residents) - Adrenal cortical adenoma  
North Carolina (Wake Forest University Residents) - Pheochromocytoma  
Ohio (Worthington) - Adrenal cortical adenoma  
Oklahoma (South Tulsa) - Pheochromocytoma  
Pennsylvania (Lehigh Valley Hospital) - Pheochromocytoma  
Pennsylvania (Conemaugh Medical Center Residents) - Pheochromocytoma  
Pennsylvania (Allegheny General Hospital) - Pheochromocytoma  
Wisconsin (Meriter Health Services) - Pheochromocytoma (probably malignant)  
Australia (Royal Prince Alfred Hospital) - Pheochromocytoma  
Australia (North Queensland Pathology Group) - Pheochromocytoma  
Canada (Foothills Hospital) - Pheochromocytoma  
Japan (Kyoto Prefectural University of Medicine) - Pheochromocytoma (2); Malignant pheochromocytoma (1); Glomerulosa cell adenoma (1)  
Japan (Kawasaki Medical School) - Pheochromocytoma  
Puerto Rico (Porto-Portugal Group) - Pheochromocytoma  
Saudi Arabia (King Khalid University Hospital Study Group) - Pheochromocytoma  
Singapore - Pheochromocytoma

### **CASE 3 - DIAGNOSIS:**

**Pheochromocytoma, adrenal**  
T-93000, M-87000

### **CASE 3 - REFERENCES:**

Lack EE and Travis WD. Diagnostic Problems in Surgical Pathology of the Adrenal Glands. *Mod Pathol* 1995; 8(3):312-332.  
John H, Ziegler WH, Hauri D and Jaeger P. Pheochromocytomas. Can Malignant Potential be Predicted? *Urol* 1999;53(4):679-683.  
Amos AM and McRoberts JW. Cushing's Syndrome Associated with a Pheochromocytoma. *Urol* 1998; 52(2):331-335.  
Dannenberg H, Speel EJ, Zhao J, Saremaslani P, et al. Losses of Chromosomes 1p and 3q are Early Genetic Events in the Development of Sporadic Pheochromocytomas. *Am J Pathol*; 157(2):353-359.

**Case No. 4, Accession No. 28721**

**February 2001**

Bakersfield - Adrenal cortical carcinoma  
Bay Area - Adrenal cortical carcinoma (3)  
Hayward/Fremont - Adrenal cortical carcinoma (3); Adrenal adenoma (3)  
Loma Linda Residents - Adrenocortical carcinoma (6); Nodular cortical hyperplasia (1)  
Long Beach - Adrenal cortical carcinoma (7)  
Los Angeles UCLA Residents - Adrenal cortical carcinoma  
Monterey (Community Hospital of Monterey Peninsula) - Adrenal cortical carcinoma  
Monterey Park (Garfield Medical Center) - Adrenal cortical adenoma  
Mountain View (El Camino Pathology Group) - Adrenal cortical adenoma  
Oakland (Kaiser) - Adrenal cortical adenoma (4)  
Orange (UCI Medical Center) - Adrenal cortical carcinoma  
Sacramento (UC Davis) - Adrenal cortical carcinoma (7)  
San Diego (Naval Medical Center) - Adrenal cortical carcinoma  
Santa Clara (Santa Clara Valley) - Adrenal cortical carcinoma (6)  
Santa Rosa (Santa Rosa Memorial Hospital) - Adrenocortical carcinoma (3)  
Ventura (Unilab) - Adrenal cortical carcinoma  
Florida (Monroe Regional Medical Center) - Adrenal cortical adenoma  
Florida (Winter Haven Hospital) - Adrenocortical carcinoma (2)  
Florida (Tallahassee) - Adrenal adenoma (1); Adrenal cortical tumor of undetermined metastasis potential (?) (2)  
Illinois (Burr Ridge) - Adenoma with Cushing's syndrome  
Illinois (Cook County Hospital Residents) - Adrenal cortical carcinoma vs. adenoma  
Illinois (DuPage Pathology Associates) - Adrenal cortical adenoma (2)  
Indiana (Fort Wayne) - Adrenal cortical adenoma, left adrenal gland  
Kentucky (University of Louisville Residents) - Adrenal cortical carcinoma  
Louisiana (Louisiana State University Medical Center) - Nodular hyperplasia, adrenal  
Louisiana (Tulane University Medical Center) - Adrenal cortical carcinoma  
Maryland (Woodbine) - Adrenal cortical carcinoma (2)  
Maryland (National Naval Medical Center) - Adrenal cortical carcinoma (8); Adrenal cortical neoplasm of uncertain malignant potential (1)  
Maryland (University of Maryland) - Adrenocortical carcinoma  
Maryland (Johns Hopkins Hospital Residents) - Adrenal cortical carcinoma with vascular invasion vs. metastatic renal cell carcinoma, would stain for EMA, cytokeratin  
Massachusetts (New England Medical Center Residents) - Adrenal cortical neoplasm, probably malignant  
Massachusetts (Berkshire Medical Center) - Adrenocortical carcinoma  
Michigan (St. Joseph Mercy Hospital) - Adrenal cortical carcinoma  
Michigan (Oakwood Hospital) - Adrenocortical adenoma  
Nebraska (Creighton University School of Medicine) - Adenoma, cortical  
New Jersey (Overlook Hospital) - Adrenal cortical neoplasm of uncertain biological potential (3)  
New York (SUNY Stony Brook University Hospital Residents) - Adrenocortical carcinoma (functional per history) (10)  
New York (Impath) - Adrenal cortical carcinoma

New York (Long Island Jewish Medical Center) - Adrenocortical tumor, uncertain biological potential  
New York (DVAMC, Northport) - Adrenal cortical carcinoma  
New York (Beth Israel Medical Center Residents) - Adrenal cortical carcinoma  
North Carolina (Wake Forest University Residents) - Adrenal cortical carcinoma  
Ohio (Worthington) - Adrenal cortical adenoma  
Oklahoma (South Tulsa) - Adrenal cortical adenoma  
Pennsylvania (Lehigh Valley Hospital) - Adrenal cortical neoplasm  
Pennsylvania (Conemaugh Medical Center Residents) - Adrenal cortical carcinoma  
Pennsylvania (Allegheny General Hospital) - Adrenal cortical carcinoma  
Wisconsin (Meriter Health Services) - Adrenocortical carcinoma  
Alaska (Anchorage) - Adrenocortical adenocarcinoma  
Australia (Royal Prince Alfred Hospital) - Adrenal cortical carcinoma (based on necrosis)  
Australia (North Queensland Pathology Group) - Adrenal cortical carcinoma  
Canada (Foothills Hospital) - Adrenocortical adenoma  
Japan (Kyoto Prefectural University of Medicine) - Cortical hyperplasia (1); Cortical adenoma (2); Cortical adenocarcinoma (1)  
Japan (Kawasaki Medical School) - Cortical adenoma  
Puerto Rico (Porto-Portugal Group) - Adrenal cortical carcinoma  
Saudi Arabia (King Khalid University Hospital Study Group) - Adrenal cortical carcinoma  
Singapore - Cortical carcinoma

#### **CASE 4 - DIAGNOSIS:**

##### **Adrenal cortical carcinoma**

T-93000, M-83703

#### **CASE 4 - REFERENCES:**

Goldblum JR, Shannon R, Kaldjian EP, et al. Immunohistochemical Assessment of Proliferative Activity in Adrenocortical Neoplasms. *Mod Pathol* 1993; 6(6):663-668.  
 Vargas MP, Vargas HI, Kleiner DE and Merino MJ. Adrenocortical Neoplasms. Role of Prognostic Markers MIB-1, P53, and RB. *Am J Surg Pathol* 1997; 21(5):556-562.  
 Medeiros LJ and Weiss LM. New Developments in the Pathologic Diagnosis of Adrenal Cortical Neoplasms. A Review. *Am J Clin Pathol* 1992; 97(1):73-83.

#### **Case No. 5, Accession No. 28951**

**February 2001**

Bakersfield - Metastatic melanoma  
Bay Area - Pheochromocytoma (? composite type) (3)  
Hayward/Fremont - Pigmented pheochromocytoma (Gorlin syndrome)  
Loma Linda Residents - Melanoma (7)  
Long Beach - Malignant melanoma (7)  
Los Angeles UCLA Residents - Pheochromocytoma  
Monterey (Community Hospital of Monterey Peninsula) - Melanoma  
Monterey Park (Garfield Medical Center) - Malignant melanoma  
Mountain View (El Camino Pathology Group) - Metastatic melanoma  
Oakland (Kaiser) - Adrenal cortical carcinoma (4)  
Orange (UCI Medical Center) - (no answer)  
Sacramento (UC Davis) - Malignant peripheral nerve sheath tumor (7)  
San Diego (Naval Medical Center) - Metastatic malignant melanoma  
Santa Clara (Santa Clara Valley) - Melanoma (6)  
Santa Rosa (Santa Rosa Memorial Hospital) - Malignant melanoma (3)  
Ventura (Unilab) - Malignant melanotic Schwannoma (2)  
Alaska (Anchorage) - Malignant melanoma  
Florida (Monroe Regional Medical Center) - Melanoma vs. pigmented epithelioid Schwannoma



Florida (Winter Haven Hospital) - Metastatic melanoma (1); Primary pigmented nodular adrenal disease (1)  
Florida (Tallahassee) - Melanotic Schwannoma (3)  
Illinois (Burr Ridge) - Black adenoma  
Illinois (Cook County Hospital Residents) - Pigmented pheochromocytoma vs. melanoma  
Illinois (DuPage Pathology Associates) - Malignant melanoma (2)  
Indiana (Fort Wayne) - Pigmented epithelioid Schwannoma, left adrenal gland  
Kentucky (University of Louisville Residents) - Melanotic pheochromocytoma  
Louisiana (Louisiana State University Medical Center) - Favor melanoma over pigmented pheochromocytoma  
Louisiana (Tulane University Medical Center) - Primary malignant melanoma, adrenal  
Maryland (Woodbine) - Melanoma (2)  
Maryland (National Naval Medical Center) - Metastatic melanoma (8); Melanocytic Schwannoma (1)  
Maryland (University of Maryland) - Melanotic Schwannoma  
Maryland (Johns Hopkins Hospital Residents) - Favor malignant melanoma (would stain for HMB45 and S100)  
Massachusetts (New England Medical Center Residents) - Malignant melanoma  
Massachusetts (Berkshire Medical Center) - Pigmented pheochromocytoma (3); vs. black adenoma (2); vs. melanotic Schwannoma (2)  
Michigan (St. Joseph Mercy Hospital) - Melanoma  
Michigan (Oakwood Hospital) - Necrotic tumor (? ancient Schwannoma)  
Nebraska (Creighton University School of Medicine) - Pigmented malignant Schwannoma  
New Jersey (Overlook Hospital) - Pigmented pheochromocytoma (3)  
New York (SUNY Stony Brook University Hospital Residents) - Black adrenocortical adenoma (10)  
New York (ImPATH) - Melanoma vs. melanotic pheochromocytoma  
New York (Long Island Jewish Medical Center) - Melanotic Schwannoma  
New York (DVAMC, Northport) - Black adenoma  
New York (Beth Israel Medical Center Residents) - Pigmented adrenal cortical adenoma  
North Carolina (Wake Forest University Residents) - Melanotic pheochromocytoma associated with neurofibromatosis II  
Ohio (Worthington) - Malignant melanotic Schwannoma  
Oklahoma (South Tulsa) - Malignant melanotic Schwannoma  
Pennsylvania (Lehigh Valley Hospital) - Metastatic melanoma  
Pennsylvania (Conemaugh Medical Center Residents) - Primary pigmented nodular adrenocortical disease  
Pennsylvania (Allegheny General Hospital) - Melanocytic Schwannoma  
Wisconsin (Meriter Health Services) - Melanoma  
Australia (Royal Prince Alfred Hospital) - Unable to make definite diagnosis—Differential diagnosis—Adrenal cortical carcinoma, metastatic melanoma  
Australia (North Queensland Pathology Group) - Metastatic melanoma  
Canada (Foothills Hospital) - Melanoma  
Japan (Kyoto Prefectural University of Medicine) - Pheochromocytoma (1); Ganglioneuroblastoma (1); Mixed neuroendocrine-neural tumor (1); Malignant melanoma (1)  
Japan (Kawasaki Medical School) - Malignant melanoma  
Puerto Rico (Porto-Portugal Group) - Epithelioid schwannoma-malignant (pigmented) – what is the connection to neurofibromatosis?  
Saudi Arabia (King Khalid University Hospital Study Group) - Pigmented pheochromocytoma  
Singapore - Melanoma

#### **CASE 5 - DIAGNOSIS:**

##### **Metastatic melanoma, adrenal**

(Note: The patient subsequently expired. There was extensive intra-cranial involvement. Tumor also involved both adrenals, a peri-hilar lymph node and numerous sites on the peritoneum. No primary cutaneous or mucosal site was identified.)

T-93000, M-87203

#### **CASE 5 - REFERENCES:**

Carstens PH, Kuhns JG and Ghazi C. Primary Malignant Melanomas of the Lung and Adrenal. *Hum Pathol* 1984; 15(10):910-914.  
 Ernest Lack.. Tumors of the Adrenal Gland and Extra-Adrenal Paraganglia. Atlas of Tumor Pathology Third Series. Fascicle 19.  
*Armed Forces Institute of Pathology.* Washington DC 1990; 102-105.

Bakersfield - Neuroendocrine tumor (islet cell tumor or carcinoid)  
Bay Area - Solid and papillary (? pseudopapillary) epithelial neoplasm (2); Neuroendocrine tumor, NOS (1)  
Hayward/Fremont - Neuroendocrine carcinoma, NOC  
Loma Linda Residents - Paranglioma (extra-adrenal pheochromocytoma) (5); Malignant pancreatic endocrine neoplasm (2)  
Long Beach - Paranglioma (7)  
Los Angeles UCLA Residents - Neuroendocrine carcinoma  
Monterey (Community Hospital of Monterey Peninsula) - Adrenal cortical carcinoma  
Monterey Park (Garfield Medical Center) - Adrenal cortical tumor  
Mountain View (El Camino Pathology Group) - Solid cystic papillary epithelial neoplasm of pancreas  
Oakland (Kaiser) - Paranglioma (3); Solid and papillary tumor of pancreas (1)  
Orange (UCI Medical Center) - Pseudopapillary neoplasm of pancreas  
Sacramento (UC Davis) - Paranglioma (7)  
San Diego (Naval Medical Center) - Paranglioma  
Santa Clara (Santa Clara Valley) - (no answer)  
Santa Rosa (Santa Rosa Memorial Hospital) - Retroperitoneal extra adrenal paranglioma  
Ventura (Unilab) - Low grade pancreatic endocrine carcinoma (2)  
Alaska (Anchorage) - Retroperitoneal paranglioma, malignant  
Florida (Monroe Regional Medical Center) - Enterochromaffin cell tumor vs. endocrine carcinoma  
Florida (Winter Haven Hospital) - Solid and papillary pancreatic tumor (1); Islet cell tumor (1)  
Florida (Tallahassee) - Low grade pancreatic endocrine carcinoma (need stains) (3)  
Illinois (Burr Ridge) - Adrenal cortical carcinoma  
Illinois (Cook County Hospital Residents) - Poorly differentiated neuroendocrine—carcinoma vs. epithelial carcinoma (poorly differentiated)  
Illinois (DuPage Pathology Associates) - Endocrine carcinoma (due to size and necrosis) (1); Neuroendocrine carcinoma (1)  
Indiana (Fort Wayne) - Adrenal cortical carcinoma, myxoid variant retroperitoneum  
Kentucky (University of Louisville Residents) - Pancreatic neuroendocrine neoplasm  
Louisiana (Louisiana State University Medical Center) - Paranglioma  
Louisiana (Tulane University Medical Center) - Adrenal cortical carcinoma, retroperitoneum  
Maryland (Woodbine) - Solid-pseudopapillary tumor (2)  
Maryland (National Naval Medical Center) - Solid and cystic papillary epithelial neoplasm of the pancreas (9)  
Maryland (University of Maryland) - Paranglioma  
Maryland (Johns Hopkins Hospital Residents) - Favor Hammoudi tumor (papillary and solid epithelial neoplasm)  
Massachusetts (New England Medical Center Residents) - Solid-pseudopapillary pancreatic tumour  
Massachusetts (Berkshire Medical Center) - Islet cell tumor (8); vs. paranglioma (1)  
Michigan (St. Joseph Mercy Hospital) - Solid and cystic papillary neoplasm of pancreas  
Michigan (Oakwood Hospital) - Pancreatic endocrine tumor  
Nebraska (Creighton University School of Medicine) - Neuroendocrine neoplasm (favor paranglioma)  
New Jersey (Overlook Hospital) - Solid pseudopapillary neoplasm pancreas (2); Adrenal cortical neoplasm vs. juvenile granulosa cell tumor (1)  
New York (SUNY Stony Brook University Hospital Residents) - Papillary and solid epithelial neoplasm (10)  
New York (Impath) - Solid pseudopapillary tumor of pancreas  
New York (Long Island Jewish Medical Center) - Solid-cystic papillary epithelial tumor of pancreas  
New York (DVAMC, Northport) - Solid cystic papillary tumor of pancreas  
New York (Beth Israel Medical Center Residents) - Solid pseudopapillary tumor of pancreas  
North Carolina (Wake Forest University Residents) - Papillary and solid epithelial neoplasm of pancreas  
Ohio (Worthington) - Solid pseudopapillary tumor  
Oklahoma (South Tulsa) - Solid pseudopapillary tumor of pancreas  
Pennsylvania (Lehigh Valley Hospital) - Paranglioma

Pennsylvania (Conemaugh Medical Center Residents) - Intra abdominal desmoplastic round cell tumor–extra adrenal paraganglioma  
Pennsylvania (Allegheny General Hospital) - Solid cystic papillary epithelial tumor  
Wisconsin (Meriter Health Services) - Solid cystic papillary neoplasm of pancreas  
Australia (Royal Prince Alfred Hospital) - Solid and cystic tumour of the pancreas  
Australia (North Queensland Pathology Group) - Paraganglioma  
Canada (Foothills Hospital) - Paraganglioma  
Japan (Kyoto Prefectural University of Medicine) - Paraganglioma (4)  
Japan (Kawasaki Medical School) - Paraganglioma, extra adrenal  
Puerto Rico (Porto-Portugal Group) - Papillary and solid epithelial neoplasm (pancreas)  
Saudi Arabia (King Khalid University Hospital Study Group) - Extra adrenal paraganglioma (4); Neuroendocrine neoplasm (2)  
Singapore - Pancreatic endocrine tumor

#### **CASE 6 - DIAGNOSIS:**

##### **Solid pseudopapillary tumor with neuroendocrine differentiation**

(Note: The tumor stained positively for NSE (3+) and synaptophysin (3+). It was focally positive for chromogranin. It was negative for gastrin, insulin, and keratin.)

T-Y4600, D-2040

#### **CASE 6 - REFERENCES:**

Notohara K, Hamazaki S, Tsukayama C, et al. Solid-Pseudopapillary Tumor of the Pancreas. Immunohistochemical Localization of Neuroendocrine Markers and CD10. *Am J Surg Pathol* 2000; 24(10):1361-1371.  
Maitra A, Weinberg AG, Schneider N, et al. Detection of t(11;22)(q24;q12) Translocation and EWS-FLI-1 Fusion Transcript in a Case of Solid Pseudopapillary Tumor of the Pancreas. *Pediatr Dev Pathol* 2000; 3(6):603-605.  
Adsay NV and Klimstra DS. Cystic Forms of Typically Solid Pancreatic Tumors. *Semin Diagn Pathol* 2000; 17(1):81-88.  
Klimstra DS, Wenig BM and Heffess CS. Solid-Pseudopapillary Tumor of the Pancreas. A Typically Cystic Carcinoma of Low Malignant Potential. *Semin Diagn Pathol* 2000; 17(1):66-80.

**Case No. 7, Accession No. 28994**

**February 2001**

Bakersfield - Follicular adenoma  
Bay Area - Hurthle cell carcinoma (3)  
Hayward/Fremont - Hurthle cell adenoma  
Loma Linda Residents - Follicular adenoma, Hurthle cell (oxyphil) variant (7)  
Long Beach - Hurthle cell tumor (7)  
Los Angeles UCLA Residents - Medullary carcinoma  
Monterey (Community Hospital of Monterey Peninsula) - Parathyroid tumor  
Monterey Park (Garfield Medical Center) - Hurthle cell tumor  
Mountain View (El Camino Pathology Group) - Hurthle cell adenoma  
Oakland (Kaiser) - Hurthle cell adenoma (4)  
Orange (UCI Medical Center) - Hurthle cell adenoma  
Sacramento (UC Davis) - Paraganglioma-like medullary carcinoma (7)  
San Diego (Naval Medical Center) - Hurthle cell neoplasm, favor adenoma  
Santa Clara (Santa Clara Valley) - Parathyroid carcinoma (4); Thyroid adenoma (2)  
Santa Rosa (Santa Rosa Memorial Hospital) - Well-differentiated follicular carcinoma (1); Thyroid follicular carcinoma (2)  
Ventura (Unilab) - Follicular adenoma (2)  
Alaska (Anchorage) - Thyroid follicular carcinoma  
Florida (Monroe Regional Medical Center) - Hurthle cell adenoma  
Florida (Winter Haven Hospital) - Hurthle cell carcinoma (1); Oncocytoma (1)  
Florida (Tallahassee) - Follicular carcinoma (Hurthle cell type) (1); Minimally invasive follicular carcinoma (1); Follicular lesion (1)  
Illinois (Burr Ridge) - Follicular adenoma  
Illinois (Cook County Hospital Residents) - Hurthle cell carcinoma

Illinois (DuPage Pathology Associates) - Hurthle cell neoplasm (minimally invasive???) (1); Hurthle cell neoplasm, most likely adenoma (1)

Indiana (Fort Wayne) - Follicular carcinoma, thyroid lobectomy specimen (Hurthle cell type)

Kentucky (University of Louisville Residents) - Follicular adenocarcinoma with Hurthle cell features

Louisiana (Louisiana State University Medical Center) - Follicular adenoma with oncocytic features

Louisiana (Tulane University Medical Center) - Oncocytic adenoma, thyroid

Maryland (Woodbine) - Nodular hyperplasia (1); Follicular carcinoma (1)

Maryland (National Naval Medical Center) - Follicular adenoma with oxyphilic metaplasia (8); Follicular carcinoma (1)

Maryland (University of Maryland) - Minimally invasive Hurthle cell carcinoma

Maryland (Johns Hopkins Hospital Residents) - Follicular/Hurthle cell carcinoma—vascular invasion is present

Massachusetts (New England Medical Center Residents) - Hurthle cell neoplasm

Massachusetts (Berkshire Medical Center) - Oncocytic carcinoma (8)

Michigan (St. Joseph Mercy Hospital) - Follicular carcinoma

Michigan (Oakwood Hospital) - Hurthle cell adenoma

Nebraska (Creighton University School of Medicine) - Oncocytic carcinoma vs. parathyroid carcinoma

New Jersey (Overlook Hospital) - Hurthle cell neoplasm, thyroid (3)

New York (SUNY Stony Brook University Hospital Residents) - Hurthle cell neoplasm (10)

New York (Impath) - Hurthle cell adenoma

New York (Long Island Jewish Medical Center) - Hurthle cell carcinoma of thyroid

New York (DVAMC, Northport) - Hurthle cell neoplasm

New York (Beth Israel Medical Center Residents) - Oncocytoma

North Carolina (Wake Forest University Residents) - Follicular adenoma

Ohio (Worthington) - Follicular carcinoma

Oklahoma (South Tulsa) - Hurthle cell adenoma

Pennsylvania (Lehigh Valley Hospital) - Paraganglioma

Pennsylvania (Conemaugh Medical Center Residents) - Hurthle cell neoplasm

Pennsylvania (Allegheny General Hospital) - Hurthle cell tumor

Wisconsin (Meriter Health Services) - Probably follicular carcinoma, need more sections to exclude follicular carcinoma

Australia (Royal Prince Alfred Hospital) - Hurthle cell carcinoma (vascular invasion)

Australia (North Queensland Pathology Group) - Follicular carcinoma of thyroid

Canada (Foothills Hospital) - Hurthle cell neoplasm favor adenoma

Japan (Kyoto Prefectural University of Medicine) - Oxyphilic adenoma 91); Oxyphilic carcinoma (2); Follicular carcinoma (1)

Japan (Kawasaki Medical School) - Follicular carcinoma

Puerto Rico (Porto-Portugal Group) - Hurthle cell adenoma (differential diagnosis with medullary carcinoma of thyroid, Hurthle cell type)

Saudi Arabia (King Khalid University Hospital Study Group) - Hurthle cell carcinoma, minimally invasive

Singapore - Follicular adenoma

#### **CASE 7 - DIAGNOSIS:**

##### **Minimally invasive Hurthle cell carcinoma, thyroid**

T-96000, M-82903

#### **CASE 7 - REFERENCES:**

Grant CS, Barr D, Goellner JR and Hay ID. Benign Hurthle Cell Tumors of the Thyroid. A Diagnosis to be Trusted? *World J Surg* 1988; 12(4):488-495.

Abu Alfa AK, Straus FH and Montag AG. An Immunohistochemical Study of Thyroid Hurthle Cells and Their Neoplasms. The Roles of S-100 and HMB-45 Proteins. *Mod Pathol* 1994; 7(5):529-532.

Caplan RH, Abellera RM and Kiskin WA. Hurthle Cell Neoplasms of the Thyroid Gland. Reassessment of Functional Capacity. *Thyroid* 1994; 4(3):243-248.

**Case No. 8, Accession No. 28736**

**February 2001**

Bakersfield - Medullary carcinoma of thyroid

Bay Area - Medullary carcinoma of thyroid (3)  
Hayward/Fremont - Medullary carcinoma with amyloid stroma  
Loma Linda Residents - Thyroid medullary carcinoma (7)  
Long Beach - Medullary carcinoma (7)  
Los Angeles UCLA Residents - Medullary carcinoma  
Monterey (Community Hospital of Monterey Peninsula) - Medullary carcinoma  
Monterey Park (Garfield Medical Center) - Medullary carcinoma  
Mountain View (El Camino Pathology Group) - Medullary carcinoma  
Oakland (Kaiser) - Medullary carcinoma (4)  
Orange (UCI Medical Center) - Medullary carcinoma  
Sacramento (UC Davis) - Medullary thyroid carcinoma (7)  
San Diego (Naval Medical Center) - Medullary thyroid carcinoma  
Santa Clara (Santa Clara Valley) - Medullary carcinoma (6)  
Santa Rosa (Santa Rosa Memorial Hospital) - Medullary carcinoma (3)  
Ventura (Unilab) - Medullary carcinoma (2)  
Alaska (Anchorage) - Thyroid medullary carcinoma  
Florida (Monroe Regional Medical Center) - Medullary carcinoma  
Florida (Winter Haven Hospital) - Medullary carcinoma (2)  
Florida (Tallahassee) - Medullary carcinoma (3)  
Illinois (Burr Ridge) - Medullary carcinoma  
Illinois (Cook County Hospital Residents) - Thyroid medullary carcinoma  
Illinois (DuPage Pathology Associates) - Medullary carcinoma (2)  
Indiana (Fort Wayne) - Medullary carcinoma, thyroid gland  
Kentucky (University of Louisville Residents) - Medullary carcinoma, thyroid  
Louisiana (Louisiana State University Medical Center) - Medullary carcinoma, thyroid  
Louisiana (Tulane University Medical Center) - Medullary carcinoma, thyroid  
Maryland (Woodbine) - Medullary carcinoma (2)  
Maryland (National Naval Medical Center) - Medullary carcinoma (9)  
Maryland (University of Maryland) - Medullary carcinoma of the thyroid  
Maryland (Johns Hopkins Hospital Residents) - Medullary carcinoma  
Massachusetts (New England Medical Center Residents) - Medullary carcinoma, most likely sporadic  
Massachusetts (Berkshire Medical Center) - Medullary carcinoma  
Michigan (St. Joseph Mercy Hospital) - Medullary carcinoma  
Michigan (Oakwood Hospital) - Medullary thyroid carcinoma  
Nebraska (Creighton University School of Medicine) - Medullary carcinoma  
New Jersey (Overlook Hospital) - Medullary carcinoma, thyroid (3)  
New York (SUNY Stony Brook University Hospital Residents) - Medullary carcinoma of thyroid (10)  
New York (Impath) - Medullary carcinoma of thyroid  
New York (Long Island Jewish Medical Center) - Medullary carcinoma of thyroid  
New York (DVAMC, Northport) - Medullary carcinoma  
New York (Beth Israel Medical Center Residents) - Medullary carcinoma  
North Carolina (Wake Forest University Residents) - Medullary thyroid carcinoma  
Ohio (Worthington) - Medullary carcinoma  
Oklahoma (South Tulsa) - Medullary carcinoma  
Pennsylvania (Lehigh Valley Hospital) - Medullary carcinoma  
Pennsylvania (Conemaugh Medical Center Residents) - Medullary carcinoma, thyroid  
Pennsylvania (Allegheny General Hospital) - Medullary carcinoma  
Wisconsin (Meriter Health Services) - Medullary carcinoma  
Australia (Royal Prince Alfred Hospital) - Medullary carcinoma of thyroid  
Australia (North Queensland Pathology Group) - Medullary carcinoma of the thyroid with amyloid  
Canada (Foothills Hospital) - Medullary carcinoma  
Japan (Kyoto Prefectural University of Medicine) - Medullary carcinoma (4)  
Japan (Kawasaki Medical School) - Medullary carcinoma

Puerto Rico (Porto-Portugal Group) - Medullary carcinoma of thyroid  
Saudi Arabia (King Khalid University Hospital Study Group) - Medullary carcinoma  
Singapore - Medullary carcinoma

#### **CASE 8 - DIAGNOSIS:**

##### **Medullary carcinoma, thyroid**

T-96000, M-85103

#### **CASE 8 - REFERENCES:**

Saad MF, Ordonez NG, Rashid RK, Guido JJ, et al. Medullary Carcinoma of the Thyroid. A Study of the Clinical Features and Prognostic Factors in 161 Patients. *Medicine* 1984; 63(6):319-342.  
Bergholm U, Adami HO, Bergstrom R, Johansson H, Lundell G, Telenius-Berg M, et al. Clinical Characteristics in Sporadic and Familial Medullary Thyroid Carcinoma. A Nationwide Study of 249 Patients in Sweden from 1959 through 1981. *Cancer* 1989; 63(6):1196-1204.  
DeLellis RA and Balogh K. Histochemical Characteristics of Parafollicular Cells and Medullary Thyroid Carcinoma. *Am J Surg Pathol* 1973; 72(1):119-128.  
Albores-Saavedra J, LiVolsi VA and Williams ED. Medullary Carcinoma. *Seminars in Diagnostic Pathology* 1985; 2(2):137-146.  
Ekman ET, Bergholm U, Backdahl M, Adami HO, Bergstrom R, et al. Nuclear DNA Content and Survival in Medullary Thyroid Carcinoma. *Cancer* 1990; 65(3):511-517.

**Case No. 9, Accession No. 27848**

**February 2001**

Bakersfield - Follicular variant papillary carcinoma  
Bay Area - Hyalinizing trabecular adenoma (3)  
Hayward/Fremont - Trabecular adenoma, thyroid, with pseudoinvasion  
Loma Linda Residents - Hyalinizing trabecular adenoma (paraganglioma like adenoma ) (7)  
Long Beach - Insular (trabecular) carcinoma (7)  
Los Angeles UCLA Residents - Paraganglioma  
Monterey (Community Hospital of Monterey Peninsula) - Follicular carcinoma  
Monterey Park (Garfield Medical Center) - Follicular adenoma  
Mountain View (El Camino Pathology Group) - Hyalinizing trabecular adenoma  
Oakland (Kaiser) - Hyalinizing trabecular adenoma/variant of papillary carcinoma (4)  
Orange (UCI Medical Center) - Follicular adenoma  
Sacramento (UC Davis) - Papillary carcinoma vs. medullary immunohistochemistry to differentiate (7)  
San Diego (Naval Medical Center) - Poorly differentiated carcinoma, favor papillary follicular variant (9); Poorly differentiated insular carcinoma (2)  
Santa Clara (Santa Clara Valley) - Papillary carcinoma (solid/trabecular variant) (6)  
Santa Rosa (Santa Rosa Memorial Hospital) - Medullary carcinoma (2); Medullary vs. follicular carcinoma of thyroid (1)  
Ventura (Unilab) - Follicular carcinoma  
Alaska (Anchorage) - Thyroid follicular adenoma vs. carcinoma  
Florida (Monroe Regional Medical Center) - Papillary carcinoma with insular pattern  
Florida (Winter Haven Hospital) - Fetal adenoma (1); Paraganglioma-like adenoma  
Florida (Tallahassee) - Hyalinizing trabecular adenoma (3)  
Illinois (Burr Ridge) - Follicular carcinoma  
Illinois (Cook County Hospital Residents) - Hyalinizing trabecular tumor of thyroid  
Illinois (DuPage Pathology Associates) - Follicular adenoma (1); Hyalinizing trabecular adenoma variant (1)  
Indiana (Fort Wayne) - PLAT neoplasm, thyroid (paraganglioma-like adenoma of thyroid)  
Kentucky (University of Louisville Residents) - Hyalinizing trabecular adenoma (minority neoplasm of uncertain malignant potential)  
Louisiana (Louisiana State University Medical Center) - Papillary carcinoma, follicular variant  
Louisiana (Tulane University Medical Center) - Papillary carcinoma, solid variant, thyroid  
Maryland (Woodbine) - Paraganglioma (2)  
Maryland (National Naval Medical Center) - Papillary carcinoma (4); Hyalinizing trabecular adenoma/carcinoma (3); Paraganglioma (2)

Maryland (University of Maryland) - Hyalinizing trabecular carcinoma  
Maryland (Johns Hopkins Hospital Residents) - Favor follicular adenoma (thyroglobulin +) vs. paraganglioma (S100, sustentacular cells, chromgranin +)  
Massachusetts (New England Medical Center Residents) - Hyalinizing trabecular adenoma  
Massachusetts (Berkshire Medical Center) - Insular carcinoma  
Michigan (St. Joseph Mercy Hospital) - Hyalinizing trabecular adenoma  
Michigan (Oakwood Hospital) - Hyalinizing trabecular adenoma  
Nebraska (Creighton University School of Medicine) - Parathyroid carcinoma vs. follicular carcinoma  
New Jersey (Overlook Hospital) - Papillary thyroid carcinoma (2); With unusual trabecular patterns (2); ? paraganglioma (1)  
New York (SUNY Stony Brook University Hospital Residents) - Hyalinizing trabecular adenoma (10)  
New York (Impath) - Hyalinizing trabecular adenoma  
New York (Long Island Jewish Medical Center) - Hyalinizing trabecular adenoma of thyroid  
New York (DVAMC, Northport) - Hyalinizing trabecular adenoma  
New York (Beth Israel Medical Center Residents) - Papillary carcinoma, follicular variant  
North Carolina (Wake Forest University Residents) - Hyalinizing trabecular adenoma  
Ohio (Worthington) - Poorly differentiated carcinoma  
Oklahoma (South Tulsa) - Hyalinizing trabecular adenoma  
Pennsylvania (Lehigh Valley Hospital) - Paraganglioma  
Pennsylvania (Conemaugh Medical Center Residents) - Hyalinizing trabecular adenoma  
Pennsylvania (Allegheny General Hospital) - Follicular variant of papillary carcinoma  
Wisconsin (Meriter Health Services) - Follicular variant of papillary carcinoma  
Australia (Royal Prince Alfred Hospital) - Hyalinizing trabecular adenoma  
Australia (North Queensland Pathology Group) - Hemorrhagic degeneration in microfollicular adenoma of thyroid  
Canada (Foothills Hospital) - Hyalinizing trabecular adenoma  
Japan (Kyoto Prefectural University of Medicine) - Hyalinizing trabecular adenoma (3); Atypical adenoma (1)  
Japan (Kawasaki Medical School) - Papillary carcinoma  
Puerto Rico (Porto-Portugal Group) - Papillary carcinoma of thyroid—solid trabecular and follicular variant  
Saudi Arabia (King Khalid University Hospital Study Group) - Follicular adenoma (trabecular)  
Singapore - Hyalinizing trabecular adenoma

#### **CASE 9 - DIAGNOSIS:**

##### **Hyalinizing trabecular carcinoma, thyroid**

T-96000, M-81903

**CONSULTATION:** Juan Rosai, M.D., Memorial Sloan-Kettering Cancer Center, New York, NY. “Poorly-differentiated thyroid carcinoma.”

#### **CASE 9 - REFERENCES:**

Jorda M, Gonzalez-Campora R, Mora J, et al. Prognostic Factors in Follicular Carcinoma of the Thyroid. *Arch Pathol Lab Med* 1993; 117(6):631-635.  
 Papotti M, Botto Micca F, Favero A, et al. Poorly Differentiated Thyroid Carcinomas with Primordial Cell Component. A Group of Aggressive Lesions Sharing Insular, Trabecular and solid Patterns. *Am J Surg Pathol* 1993; 17(3):291-301.  
 Franssila KO, Ackerman LV, Brown CL and Hedinger CE. Follicular Carcinoma. *Semin Diagn Pathol* 1985; 2(2):101-122.

**Case No. 10, Accession No. 27842**

**February 2001**

Bakersfield - Papillary carcinoma of thyroid  
Bay Area - Papillary carcinoma of the thyroid (3)  
Hayward/Fremont - Papillary carcinoma, thyroid, tall cell variant  
Loma Linda Residents - Papillary thyroid carcinoma (7)  
Long Beach - Papillary thyroid carcinoma (7)  
Los Angeles UCLA Residents - Papillary thyroid carcinoma  
Monterey (Community Hospital of Monterey Peninsula) - Papillary carcinoma

Monterey Park (Garfield Medical Center) - Papillary carcinoma, tall cell variant  
Mountain View (El Camino Pathology Group) - Papillary carcinoma, "tall cell" variant  
Oakland (Kaiser) - Papillary carcinoma (4)  
Orange (UCI Medical Center) - Papillary carcinoma  
Sacramento (UC Davis) - Papillary carcinoma (7)  
San Diego (Naval Medical Center) - Papillary carcinoma  
Santa Clara (Santa Clara Valley) - Papillary carcinoma  
Santa Rosa (Santa Rosa Memorial Hospital) - Papillary carcinoma (3)  
Ventura (Unilab) - Papillary carcinoma (2)  
Alaska (Anchorage) - Thyroid papillary carcinoma (follicular variant)  
Florida (Monroe Regional Medical Center) - Papillary carcinoma, tall cell variant  
Florida (Winter Haven Hospital) - Papillary carcinoma (2)  
Florida (Tallahassee) - Papillary carcinoma (3)  
Illinois (Burr Ridge) - Papillary carcinoma  
Illinois (Cook County Hospital Residents) - Papillary carcinoma of thyroid  
Illinois (DuPage Pathology Associates) - Papillary carcinoma (2)  
Indiana (Fort Wayne) - Papillary carcinoma, left thyroid lobe  
Kentucky (University of Louisville Residents) - Papillary carcinoma, tall cell variant  
Louisiana (Louisiana State University Medical Center) - Papillary carcinoma, thyroid  
Louisiana (Tulane University Medical Center) - Papillary carcinoma, thyroid  
Maryland (Woodbine) - Papillary carcinoma (2)  
Maryland (National Naval Medical Center) - Papillary carcinoma (9)  
Maryland (University of Maryland) - Papillary carcinoma of the thyroid  
Maryland (Johns Hopkins Hospital Residents) - Papillary carcinoma  
Massachusetts (New England Medical Center Residents) - Follicular variant of papillary carcinoma with focal tall cell change  
Massachusetts (Berkshire Medical Center) - Papillary carcinoma, NOS (4): vs. papillary carcinoma, tall cell variant (4)  
Michigan (St. Joseph Mercy Hospital) - Papillary carcinoma, columnar cell type  
Michigan (Oakwood Hospital) - Papillary carcinoma  
Nebraska (Creighton University School of Medicine) - Papillary carcinoma of thyroid  
New Jersey (Overlook Hospital) - Papillary thyroid carcinoma (3)  
New York (SUNY Stony Brook University Hospital Residents) - Papillary carcinoma of thyroid (10)  
New York (Impath) - Papillary carcinoma, thyroid  
New York (Long Island Jewish Medical Center) - Papillary carcinoma, tall cell variant  
New York (DVAMC, Northport) - Papillary carcinoma  
New York (Beth Israel Medical Center Residents) - Papillary carcinoma, tall cell variant  
North Carolina (Wake Forest University Residents) - Papillary thyroid carcinoma  
Ohio (Worthington) - Papillary thyroid carcinoma  
Oklahoma (South Tulsa) - Papillary carcinoma  
Pennsylvania (Lehigh Valley Hospital) - Papillary carcinoma  
Pennsylvania (Conemaugh Medical Center Residents) - Papillary carcinoma, thyroid  
Pennsylvania (Allegheny General Hospital) - Papillary carcinoma  
Wisconsin (Meriter Health Services) - Papillary carcinoma, high grade  
Australia (Royal Prince Alfred Hospital) - Papillary carcinoma, tall cell variant  
Australia (North Queensland Pathology Group) - Papillary carcinoma of thyroid ?? tall cell variety  
Canada (Foothills Hospital) - Papillary carcinoma, tall cell variant  
Japan (Kyoto Prefectural University of Medicine) - Papillary carcinoma (4)  
Japan (Kawasaki Medical School) - Papillary carcinoma  
Puerto Rico (Porto-Portugal Group) - Papillary carcinoma of thyroid (foci of columnar cell variant)  
Saudi Arabia (King Khalid University Hospital Study Group) - Papillary carcinoma  
Singapore - Papillary carcinoma



**CASE 10 - DIAGNOSIS:**

**Papillary carcinoma, thyroid**

T-96000, M-80503

**CASE 10 - REFERENCES:**

Hundahl SA, Cady B, Cunningham MP, et al. Initial Results from a Prospective Cohort Study of 5583 Cases of Thyroid Carcinoma in the United States During 1996. *Cancer* 2000; 89(1):202-217.

Grigsby PW, Baglan K and Siegel BA. Surveillance of Patients to Detect Recurrent Thyroid Carcinoma. *Cancer* 1999; 85(4):945-951.

Akslen LA and Li Volsi VA. Prognostic Significance of Histologic Grading Compared with Subclassification of Papillary Thyroid Carcinoma. *Cancer* 2000; 88(8):1902-1908.

Farahati J, Demidchik EP, Biko J and Reiners C. Inverse Association Between Age at the Time of Radiation Exposure and Extent of Disease in Cases of Radiation-Induced Childhood Thyroid Carcinoma in Belarus. *Cancer* 2000; 88(6):1470-1476.