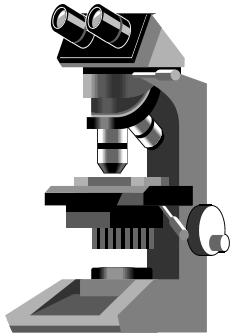


CALIFORNIA  
TUMOR TISSUE REGISTRY



*TUMORS OF THE ENDOCRINE SYSTEM*

Minutes – Subscription B

February 2000

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

- Malignant Epithelioid Vascular Tumors of the Pleura. Report of a Series and Literature Review. Zhang PJ, et al. *Hum Pathol* 2000; 31(1):29-34.
- Differential Expression of Thyroid Transcription Factor 1 in Small Cell Lung Carcinoma and Merkel Cell Tumor. Bydr-Gloster AL, et al. *Hum Pathol* 2000; 31(1):58-62.
- Solitary Fibrous Tumor of the Lower Urogenital Tract. A Report of Five Cases Involving the Seminal Vesicles, Urinary Bladder, and Prostate. Westra WH, et al. *Hum Pathol* 2000:63-68.
- Luminal Contents of Benign and Malignant Prostatic Glands. Correspondence to Altered Secretory Mechanisms. *Hum Pathol* 2000; 94-100.
- Endocrine Treatment in Prostate Cancer. Denis LJ, et al. *Sem in Surg Oncol* 2000; 18(1):52-74.

California Tumor Tissue Registry  
c/o: Department of Pathology and Human Anatomy  
Loma Linda University School of Medicine  
11021 Campus Avenue, AH 335  
Loma Linda, California 92350  
(909) 558-4788  
FAX: (909) 558-0188  
E-mail: [cttr@linkline.com](mailto:cttr@linkline.com)  
Case of the Month: [www.llu.edu/llu/cttr/cotm](http://www.llu.edu/llu/cttr/cotm)

Orange (UCI Medical Center Residents) - Marked proliferation of islet cells in chronic pancreatitis (7); Islet cell tumor (1)

Mountain View (El Camino Path Assoc.) - Pancreatic endocrine neoplasm, malignant

Glendale (Glendale Pathology Associates) - Islet cell tumor

San Diego (Naval Medical Center) - Hamartoma (1); Acinar cell carcinoma (7)

Arizona (Phoenix Memorial Hospital) - Acinar cell carcinoma

Kansas (Stormont-Vail Hospital) - Acinic cell carcinoma of the pancreas

Texas (University of Texas Medical Branch Galveston Residents) - Chronic pancreatitis with islet cell hyperplasia

Texas (ProPath Associates) - Chronic pancreatitis (1); Acinar cell carcinoma (1)

Texas (Lubbock) - Acinic carcinoma

Louisiana (River Ridge) - Chronic pancreatitis

Mississippi (Kings Daughters Medical Center) - Papillary acinar carcinoma

Florida (Monroe Regional Medical Center) - Chronic pancreatitis with fibrosis

Florida (Winter Haven Hospital) - Islet cell hyperplasia

Wisconsin (Middleton) - Acinar cell carcinoma

Missouri (Joplin) - Fibrotic with atrophy

Kentucky (University of Louisville Residents) - Islet cell hyperplasia

Michigan (St. Mary's Hospital) - Islet cell hyperplasia (1); Islet cell proliferation in chronic pancreatitis (1)

Michigan (Foote Hospital) - Chronic pancreatitis

Pennsylvania (Conemaugh Memorial Hospital Residents) - Chronic pancreatitis

Massachusetts (Longmeadow) - Chronic obstructive pancreatitis with acinar atrophy, fibrosis, and islet hyperplasia

Massachusetts (Medfield) - Diffuse hyperplasia of pancreatic islets

Massachusetts (Good Samaritan Medical Center) - Islet (endocrine pancreas) hyperplasia

New York (Montefiore Medical Care Centre) - Atrophic pancreatitis with endocrine cell hyperplasia and benign neural invasion

New York (Impath) - Well-differentiated endocrine tumor of pancreas (islet cell tumor)

Maryland (National Naval Medical Center) - Chronic pancreatitis

Canada, Calgary (Foothills Hospital) - Pancreatic endocrine tumor (islet cell tumor)

Japan (Shimada City) - Chronic pancreatitis

Japan (Hamamatsu University School of Medicine) - Chronic pancreatitis

Japan (Kurashiki Medical School) - Islet cell tumor (2); Islet cell hyperplasia (2)

Saudi Arabia (King Khalid University Hospital) - Chronic pancreatitis

**DIAGNOSIS:**

**Islet Cell Tumor ("Pancreatic Endocrine Tumor"), Pancreas**

T-59000, M-81503

**REFERENCES:**

- Kenny BD, et al. The Role of Morphometry in Predicting Prognosis in Pancreatic Islet Cell Tumors. *Cancer* 1989; 64(2):460-465.
- Kimura W, et al. Clinical Pathology of Endocrine Tumors of the Pancreas. Analysis of Autopsy Cases. *Dig Dis Sc* 1991; 36(7):933-942.
- Cryer PE, et al. Pancreatic Islet Cell Carcinoma with Hypercalcemia and Hypergastrinemia. Response to Streptozotocin Cancer. *Cancer* 1976; 38(6): 2217-2221.
- De Jong SA, et al. Noductal Tumors of the Pancreas. The Importance of Laparotomy. *Arch Surg* 1993; 128:730-736.
- McKinnon JG, et al. Palliative Treatment of Neuroendocrine Tumors. *Sem in Surg Oncol* 1993; 9(5):453-458.
- Guarda LA, et al. Clear Cell Islet Cell Tumor. *Am J Clin Pathol* 1983; 79(4):512-513.

Orange (UCI Medical Center Residents) - Solid-pseudopapillary tumor of pancreas, low grade malignancy (4); Endocrine carcinoma of pancreas (4)

Mountain View (El Camino Path Assoc.) - Pancreatic endocrine neoplasm, oncocytic type

Glendale (Glendale Pathology Associates) - Islet cell tumor

San Diego (Naval Medical Center) - Neuroendocrine cell carcinoma (7); Endocrine cell carcinoma (1)

Arizona (Phoenix Memorial Hospital) - Endocrine carcinoma

Kansas (Stormont-Vail Hospital) - Islet-cell tumor of the pancreas

Texas (University of Texas Medical Branch Galveston Residents) - Pancreatic endocrine tumor, metastatic

Texas (ProPath Associates) - Metastatic islet cell tumor (1); Metastatic neuroendocrine tumor (islet cell carcinoma) (1)

Texas (Lubbock) - Islet cell tumor, malignant

Louisiana (River Ridge) - Malignant islet cell tumor

Mississippi (Kings Daughters Medical Center) - Neuroendocrine carcinoma

Florida (Monroe Regional Medical Center) - Endocrine carcinoma

Florida (Winter Haven Hospital) - Malignant pancreatic endocrine tumor

Wisconsin (Middleton) - Islet cell tumor

Missouri (Joplin) - Metastatic malignant islet cell tumor

Kentucky (University of Louisville Residents) - Islet cell tumor, malignant

Michigan (St. Mary's Hospital) - Pancreatic endocrine carcinoma (1); Oncocytic neuroendocrine carcinoma (1)

Michigan (Foote Hospital) - Metastatic islet cell tumor

Pennsylvania (Conemaugh Memorial Hospital Residents) - Endocrine carcinoma, pancreas

Massachusetts (Longmeadow) - Endocrine carcinoma, pancreas

Massachusetts (Medfield) - Metastatic islet tumor of pancreas to lymph node

Massachusetts (Good Samaritan Medical Center) - Neuroendocrine carcinoma

New York (Montefiore Medical Care Centre) - Pancreatic endocrine neoplasm, malignant metastatic

New York (ImPath) - Metastatic well-differentiated endocrine carcinoma of pancreas (metastatic islet cell tumor)

Maryland (National Naval Medical Center) - Pancreatic endocrine neoplasm

Canada, Calgary (Foothills Hospital) - Mixed acinar - endocrine carcinoma

Japan (Shimada City) - Endocrine carcinoma of the pancreas

Japan (Hamamatsu University School of Medicine) - Well-differentiated endocrine carcinoma

Japan (Kurashiki Medical School) - Islet cell tumor (3); Acinic cell carcinoma (1)

Saudi Arabia (King Khalid University Hospital) - Differentiated neuroendocrine carcinoma, low grade, pancreas

## **DIAGNOSIS:**

**Neuroendocrine Carcinoma with Oncocytic Change ("Pancreatic Endocrine Tumor, Malignant")**

T-59000, M-73050, T-80103

## **REFERENCES:**

- Carlei F, et al. Antibodies to Neuron-Specific Enolase for the Delineation of the Entire Diffuse Neuroendocrine System in Health and Disease. *Semin Diag Pathol* 1984;1(1):59-70.
- Germann PG, et al. RITA/Registry of Industrial Toxicology Animal Data. A Comparative Immunohistochemical Study of 77 Islet Cell Carcinomas in Sprague-Dawley and Wistar Rats Using Antibodies Against Insulin, Glucagon, Somatostatin and Gastrin. *Exp Toxicol Pathol* 1999; 51(6):477-487.
- Compton CC. Protocol for the Examination of Specimens From Patients with Endocrine Tumors of the Pancreas, Including Those with Mixed Endocrine and Acinar Cell Differentiation. A Basis for Checklists. Cancer Committee of the College of American Pathologists. *Arch Pathol Lab Med* 2000; 124(1):30-36.

Orange (UCI Medical Center Residents) - Adrenocortical adenoma  
Mountain View (El Camino Path Assoc.) - Cortical hyperplasia associated with Conn's syndrome  
Glendale (Glendale Pathology Associates) - Adrenal cortical adenoma  
San Diego (Naval Medical Center) - Adrenal cortical hyperplasia (3); Adenoma (4); Mixed micro and macronodular adrenal cortical hyperplasia (1)  
Arizona (Phoenix Memorial Hospital) - Cortical hyperplasia, adrenal  
Kansas (Stormont-Vail Hospital) - Adrenal cortical adenoma  
Texas (University of Texas Medical Branch Galveston Residents) - Adrenal cortical adenoma (rare spironolactone bodies seen)  
Texas (ProPath Associates) - Cortical adenoma of adrenal (1); (Conn's syndrome) with functioning adrenal adenoma (1)  
Texas (Lubbock) - Hyperplasia of adrenal gland  
Louisiana (River Ridge) - Adrenocortical adenoma  
Mississippi (Kings Daughters Medical Center) - Nodular adrenal cortical hyperplasia  
Florida (Monroe Regional Medical Center) - Nodular adrenal cortical hyperplasia  
Florida (Winter Haven Hospital) - Adrenocortical adenoma  
Wisconsin (Middleton) - Cortical adenoma  
Missouri (Joplin) - Adrenal cortical adenoma  
Kentucky (University of Louisville Residents) - Aldosterone-secreting adenoma  
Michigan (St. Mary's Hospital) - Adrenal cortical adenoma (2)  
Michigan (Foote Hospital) - Adrenal cortical adenoma  
Pennsylvania (Conemaugh Memorial Hospital Residents) - Adrenal cortical hyperplasia consistent with Conn's syndrome  
Massachusetts (Longmeadow) - Adrenal cortical adenoma with aldosteronism  
Massachusetts (Medfield) - Adrenocortical adenoma  
Massachusetts (Good Samaritan Medical Center) - Adrenal cortical adenoma (aldosteronoma)  
New York (Montefiore Medical Care Centre) - Aldosteronoma producing cortical adenoma  
New York (Impath) - Adrenal cortical adenoma  
Maryland (National Naval Medical Center) - Cortical adenoma (aldosteronoma)  
Canada, Calgary (Foothills Hospital) - Adrenocortical adenoma with spironolactone bodies  
Japan (Shimada City) - Cortical nodular hyperplasia  
Japan (Hamamatsu University School of Medicine) - Adrenal cortical adenoma associated with Conn's syndrome  
Japan (Kurashiki Medical School) - Cortical adenoma (4)  
Saudi Arabia (King Khalid University Hospital) - Nodular cortical hyperplasia, adrenal gland

**DIAGNOSIS:**

**Aldosterone-Secreting Adrenal Cortical Adenoma Associated with Conn's Syndrome**

T-93000, M-81400

**REFERENCES:**

Weiss LM. Comparative Histologic Study of 43 metastasizing and Nonmetastasizing Adrenocortical Tumors. *Am J Surg Pathol* 1984; 8(3):163-169.  
Icard P, et al. Adrenocortical Carcinoma in Surgically Treated Patients. A Retrospective Study on 156 Cases by the French Association of Endocrine Surgery. *Surg* 1992; 112(6):972-980.  
Medeiros LJ, et al. New Developments in the Pathologic Diagnosis of Adrenal Cortical Neoplasms. A Review. *Am J Clin Pathol* 1992; 97(1):73-83.  
Chan JK, et al. Endocrine Malignancies That May Mimic Benign Lesions. *Semin Diag Pathol* 1995; 12(1):45-63.  
(Also See References to Case 5)

Orange (UCI Medical Center Residents) - Pheochromocytoma  
Mountain View (El Camino Path Assoc.) - Pheochromocytoma (pigmented)  
Glendale (Glendale Pathology Associates) - Pheochromocytoma  
San Diego (Naval Medical Center) - Pheochromocytoma (8)  
Arizona (Phoenix Memorial Hospital) - Pheochromocytoma, adrenal  
Kansas (Stormont-Vail Hospital) - Pheochromocytoma  
Texas (University of Texas Medical Branch Galveston Residents) - Pheochromocytoma  
Texas (Propath Associates) - Pheochromocytoma (2)  
Texas (Lubbock) - Pheochromocytoma  
Louisiana (River Ridge) - Pheochromocytoma  
Mississippi (Kings Daughters Medical Center) - Pheochromocytoma  
Florida (Monroe Regional Medical Center) - Pheochromocytoma  
Florida (Winter Haven Hospital) - Pheochromocytoma  
Wisconsin (Middleton) - Pheochromocytoma  
Missouri (Joplin) - Pheochromocytoma  
Kentucky (University of Louisville Residents) - Pheochromocytoma  
Michigan (St. Mary's Hospital) - Pheochromocytoma (2)  
Michigan (Foote Hospital) - Pheochromocytoma  
Pennsylvania (Conemaugh Memorial Hospital Residents) - Pheochromocytoma  
Massachusetts (Longmeadow) - Adrenal Pheochromocytoma  
Massachusetts (Medfield) - Pheochromocytoma  
Massachusetts (Good Samaritan Medical Center) - Neural endocrine tumor-pheochromocytoma  
New York (Montefiore Medical Care Centre) - Pheochromocytoma  
New York (Impath) - Pheochromocytoma  
Maryland (National Naval Medical Center) - Pheochromocytoma  
Canada, Calgary (Foothills Hospital) - Pheochromocytoma  
Japan (Shimada City) - Pheochromocytoma  
Japan (Hamamatsu University School of Medicine) - Pheochromocytoma  
Japan (Kurashiki Medical School) - Pheochromocytoma, pigmented (4)  
Saudi Arabia (King Khalid University Hospital) - Pheochromocytoma, adrenal gland

**DIAGNOSIS:**

**Pheochromocytoma, Adrenal Gland**

T-93000, M-87000

**REFERENCES:**

- Modlin IM, et al. Pheochromocytomas in 72 Patients. Clinical and Diagnostic Features, Treatment and Long-Term Results. *Br J Surg* 1979; 66(7):456-465.
- Chetty R, et al. Bilateral Pheochromocytoma. Ganglioneuroma of the Adrenal in Type 1 Neurofibromatosis. *Am J Surg Pathol* 1993; 17(8):837-841.
- Bigner SH, et al. Medullary Carcinoma of the Thyroid in the Multiple Endocrine Neoplasia IIA Syndrome. *Am J Surg Pathol* 1981; 5(5):459-472.
- Steinhoff MM, et al. Stromal Amyloid in Pheochromocytoma. *Hum Pathol* 1992; 23(1):33-36.
- Walther MM, et al. Clinical and Genetic Characterization of Pheochromocytoma in von Hippel-Lindau Families. Comparison with Sporadic Pheochromocytoma Gives Insight into Natural History of Pheochromocytoma. *J Urol* 1999; 162(3 Pt 1):659-664.

Orange (UCI Medical Center Residents) - Adrenal cortical adenoma (4); Adrenal cortical neoplasm with undeterminant biological behavior (4)  
Mountain View (El Camino Path Assoc.) - Cortical adenoma  
Glendale (Glendale Pathology Associates) - Adrenal cortical adenoma  
San Diego (Naval Medical Center) - Adrenal cortical adenoma (7); Uncertain malignant potential (1)  
Arizona (Phoenix Memorial Hospital) - Cortical adenoma, adrenal  
Kansas (Stormont-Vail Hospital) - Adrenal cortical adenoma  
Texas (University of Texas Medical Branch Galveston Residents) - Adrenal cortical tumor, histologically benign; cannot exclude well-differentiated adrenocortical carcinoma  
Texas (ProPath Associates) - Adrenal cortical carcinoma (2)  
Texas (Lubbock) - Well-differentiated adenocarcinoma  
Louisiana (River Ridge) - Adrenal cortical adenoma  
Mississippi (Kings Daughters Medical Center) - Cortical adenoma  
Florida (Monroe Regional Medical Center) - Cortical adenoma  
Florida (Winter Haven Hospital) - Adrenocortical adenoma  
Wisconsin (Middleton) - Adrenal cortical adenoma  
Missouri (Joplin) - Adrenal cortical adenoma  
Kentucky (University of Louisville Residents) - Adrenal cortical tumor, probably adenoma  
Michigan (St. Mary's Hospital) - Adrenal cortical adenoma (2)  
Michigan (Foote Hospital) - Adrenal cortical adenoma  
Pennsylvania (Conemaugh Memorial Hospital Residents) - Adrenal cortical adenoma  
Massachusetts (Longmeadow) - Adrenal cortical adenoma  
Massachusetts (Medfield) - Adrenocortical carcinoma  
Massachusetts (Good Samaritan Medical Center) - Adrenal cortical adenoma, carcinoma cannot be excluded  
New York (Montefiore Medical Care Centre) - Adrenal cortical adenoma  
New York (Impath) - Adrenal cortical adenoma  
Maryland (National Naval Medical Center) - Adrenal cortical neoplasm (favor adenoma)  
Canada, Calgary (Foothills Hospital) - Adrenocortical adenoma (r/o Cushing's)  
Japan (Shimada City) - Adrenal cortical adenoma  
Japan (Hamamatsu University School of Medicine) - Adrenal cortical adenoma  
Japan (Kurashiki Medical School) - Cortical adenoma, possibly aldosterone-producing (4)  
Saudi Arabia (King Khalid University Hospital) - Adrenocortical adenoma, adrenal gland

**DIAGNOSIS:**

**Adrenal Cortical Adenoma**

T-93000, M-83700

**REFERENCES:**

Hirano Y, et al. Telomerase Activity as an Indicator of Potentially Malignant Adrenal Tumors. *Cancer* 1998(4); 83:772-776.  
Amberson JB, et al. Flow Cytometric Analysis of Nuclear DNA from Adrenocortical Neoplasms.. A Retrospective Study Using Paraffin-Embedded Tissue. *Cancer* 1987; 59(12):2091-2095.  
Weiss LM, et al. Comparative Histologic Study of 43 Metastasizing and Nonmetastasizing Adrenocortical Tumors. *Am J Surg Pathol* 1984; 8(3):163-169.

Orange (UCI Medical Center Residents) - Thymoma  
Mountain View (El Camino Path Assoc.) - Multilobulated cystic thymoma  
Glendale (Glendale Pathology Associates) - Cystic thymoma  
San Diego (Naval Medical Center) - Thymoma (7); Spindle cell thymoma (1)  
Arizona (Phoenix Memorial Hospital) - Cystic thymoma  
Kansas (Stormont-Vail Hospital) - Multi-lobular thymic cyst  
Texas (University of Texas Medical Branch Galveston Residents) - Thymoma  
Texas (ProPath Associates) - Lymphocytic thymoma (1); Thymoma (1)  
Texas (Lubbock) - Thymoma, predominantly mixed  
Louisiana (River Ridge) - Thymoma  
Mississippi (Kings Daughters Medical Center) - Thymoma  
Florida (Monroe Regional Medical Center) - Cystic thymoma  
Florida (Winter Haven Hospital) - Multicystic thymoma  
Wisconsin (Middleton) - Thymoma  
Missouri (Joplin) - Thymoma  
Kentucky (University of Louisville Residents) - Thymoma  
Michigan (St. Mary's Hospital) - Thymic cyst (2)  
Michigan (Foote Hospital) - Lymphocyte predominant thymoma  
Pennsylvania (Conemaugh Memorial Hospital Residents) - Spindle cell thymoma  
Massachusetts (Longmeadow) - Thymoma with a prominent spindle cell component  
Massachusetts (Medfield) - Thymic hyperplasia  
Massachusetts (Good Samaritan Medical Center) - Thymoma  
New York (Montefiore Medical Care Centre) - Benign thymoma  
New York (ImPath) - Thymoma, AB type  
Maryland (National Naval Medical Center) - Thymoma  
Canada, Calgary (Foothills Hospital) - Encapsulated thymoma  
Japan (Shimada City) - Encapsulated thymoma  
Japan (Hamamatsu University School of Medicine) - Thymoma  
Japan (Kurashiki Medical School) - Thymoma, encapsulated (4)  
Saudi Arabia (King Khalid University Hospital) - Thymoma, thymus

**DIAGNOSIS:**

**Encapsulated Mixed Thymoma with Spindle Cell Component**

T-98000, M-85800

**REFERENCES:**

- Gripp S, et al. Thymoma. Prognostic Factors and Treatment Outcomes. *Cancer* 1998; 83(8):1495-1503.  
Hammond EH, et al. The Diagnosis of Thymoma. A Review. *Ultrastruct Pathol* 1991; 15(4-5):419-438.  
Kuo TT, et al. DNA Flow Cytometric Study of Thymic Epithelial Tumors with Evaluation of It's Usefulness in the Pathologic Classification. *Hum Pathol* 1993; 24(7):746-749.  
Kuo TT, et al. Thymoma. A Study of the Pathologic Classification of 71 Cases with Evaluation of the Muller-Hermelink System. *Hum Pathol* 1993; 24(7):746-749.  
Pescarmona E, et al. The Prognostic Implication of Thymoma Histologic Subtyping. A Study of 80 Consecutive Cases. *Amer J of Clin Pathol* 1990; 93(2):190-195.  
Nussbaum MS, et al. Management of Myasthenia Gravis by Extended Thymectomy with Anterior Mediastinal Dissection. *Surg* 1992; 112(4):681-688.

Orange (UCI Medical Center Residents) - Medullary thyroid carcinoma, small cell variant (5); Small cell carcinoma (3)

Mountain View (El Camino Path Assoc.) - Medullary carcinoma

Glendale (Glendale Pathology Associates) - Insular carcinoma

San Diego (Naval Medical Center) - Anaplastic thyroid carcinoma (7); Undifferentiated carcinoma associated with chronic lymphocytic thyroiditis (1)

Arizona (Phoenix Memorial Hospital) - Undifferentiated carcinoma with focal chondroid metaplasia

Kansas (Stormont-Vail Hospital) - Small cell anaplastic carcinoma

Texas (University of Texas Medical Branch Galveston Residents) - Small cell carcinoma, metastatic

Texas (Propath Associates) - Medullary carcinoma of thyroid (1); Poorly differentiated thyroid carcinoma-insular pattern (1)

Texas (Lubbock) - Anaplastic carcinoma

Louisiana (River Ridge) - Small cell neuroendocrine carcinoma

Mississippi (Kings Daughters Medical Center) - Anaplastic carcinoma

Florida (Monroe Regional Medical Center) - Small cell carcinoma

Florida (Winter Haven Hospital) - Medullary carcinoma

Wisconsin (Middleton) - Poorly differentiated carcinoma

Missouri (Joplin) - Metastatic poorly differentiated small cell carcinoma

Kentucky (University of Louisville Residents) - Anaplastic thyroid carcinoma with neuroendocrine and sarcomatous differentiation

Michigan (St. Mary's Hospital) - Metastatic small cell carcinoma (1); Small cell undifferentiated carcinoma, metastatic to thyroid (1)

Michigan (Foote Hospital) - Medullary thyroid carcinoma

Pennsylvania (Conemaugh Memorial Hospital Residents) - Medullary carcinoma, small cell variant/small cell carcinoma

Massachusetts (Longmeadow) - Medullary carcinoma, small cell neuroendocrine type, thyroid

Massachusetts (Medfield) - Medullary carcinoma of thyroid

Massachusetts (Good Samaritan Medical Center) - Metastatic poorly differentiated carcinoma, favor lung origin

New York (Montefiore Medical Care Centre) - Small cell neuroendocrine carcinoma

New York (Impath) - Medullary carcinoma of thyroid gland

Maryland (National Naval Medical Center) - Poorly differentiated neuroendocrine carcinoma (small cell carcinoma)

Canada, Calgary (Foothills Hospital) - Medullary carcinoma, thyroid

Japan (Shimada City) - Medullary thyroid carcinoma, undifferentiated

Japan (Hamamatsu University School of Medicine) - Undifferentiated carcinoma, small cell type

Japan (Kurashiki Medical School) - Small cell neuroendocrine carcinoma (3); Medullary carcinoma (1)

Saudi Arabia (King Khalid University Hospital) - Medullary carcinoma, thyroid

**DIAGNOSIS:**

**Small Cell Neuroendocrine Carcinoma ("Small Cell Variant of Medullary Carcinoma"), Thyroid**  
T-96000, M-85103

**REFERENCES:**

- Bussolati G, et al. Medullary Carcinoma of the Thyroid with Atypical Patterns. *Cancer* 1979; 44(5):1769-1777.
- Saad MF, 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, 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.
- Bigner SH, et al. Medullary Carcinoma of the Thyroid in Multiple Endocrine Neoplasia IIA Syndrome. *Am J Surg Pathol* 1981; 5(5):459-472.
- Eusebi V, et al. Calcitonin Free Oat Cell Carcinoma of the Thyroid Gland. *Virchows Arch (A)* 1990; 417:267-271.



Orange (UCI Medical Center Residents) - Hurthle cell adenoma  
Mountain View (El Camino Path Assoc.) - Hurthle cell adenoma  
Glendale (Glendale Pathology Associates) - Hurthle cell adenoma  
San Diego (Naval Medical Center) - Hurthle cell adenoma (8)  
Arizona (Phoenix Memorial Hospital) - Hurthle cell adenoma  
Kansas (Stormont-Vail Hospital) - Follicular adenoma  
Texas (University of Texas Medical Branch Galveston Residents) - Hurthle cell tumor  
Texas (ProPath Associates) - Hurthle cell tumor (2)  
Texas (Lubbock) - Hurthle cell adenoma  
Louisiana (River Ridge) - Follicular neoplasm favor adenoma  
Mississippi (Kings Daughters Medical Center) - Follicular adenoma  
Florida (Monroe Regional Medical Center) - Follicular adenoma  
Florida (Winter Haven Hospital) - Follicular adenoma  
Wisconsin (Middleton) - Follicular adenoma with Hurthle cell features  
Missouri (Joplin) - Atypical follicular adenoma with oncocyctic change  
Kentucky (University of Louisville Residents) - Follicular adenoma with Hurthle cell features  
Michigan (St. Mary's Hospital) - Follicular adenoma (2)  
Michigan (Foote Hospital) - Hurthle cell adenoma  
Pennsylvania (Conemaugh Memorial Hospital Residents) - Follicular adenoma  
Massachusetts (Longmeadow) - Hurthle cell adenoma, follicular type, thyroid  
Massachusetts (Medfield) - Follicular adenoma of thyroid (colloid type)  
Massachusetts (Good Samaritan Medical Center) - Macro and ?follicular thyroid adenoma with exophytic changes  
New York (Montefiore Medical Care Centre) - Hurthle cell adenoma  
New York (Impath) - Hurthle cell tumor (probable adenoma)  
Maryland (National Naval Medical Center) - Follicular adenoma  
Canada, Calgary (Foothills Hospital) - Hurthle cell favor adenoma  
Japan (Shimada City) - Oncocyctic adenoma of the thyroid  
Japan (Hamamatsu University School of Medicine) - Follicular adenoma  
Japan (Kurashiki Medical School) - Follicular adenoma (2); Adenomatoid nodule (2)  
Saudi Arabia (King Khalid University Hospital) - Hurthle cell adenoma, thyroid

**DIAGNOSIS:**

**Follicular Adenoma with Hurthle Cell Features ("Hurthle Cell Adenoma"), Thyroid**

T-96000, M-83300

**REFERENCES:**

Mittendorf EA, et al. Follow-Up Evaluation and Clinical Course of Patients with Benign Nodular Thyroid Disease. *Am Surg* 1999; 65(7):653-658.  
Frisk T, et al. Low Frequency of Numerical Chromosomal Aberrations in Follicular Thyroid Tumors Detected by Comparative Genomic Hybridization. *Genes Chromosomes Cancer* 1999; 25(4):349-353.

Orange (UCI Medical Center Residents) - Follicular carcinoma  
Mountain View (El Camino Path Assoc.) - Follicular carcinoma  
Glendale (Glendale Pathology Associates) - Follicular carcinoma, minimally invasion  
San Diego (Naval Medical Center) - Follicular carcinoma with evidence of capsular invasion and angioinvasion (7); Well-differentiated angioinvasive follicular carcinoma (1)  
Arizona (Phoenix Memorial Hospital) - Hurthle cell carcinoma  
Kansas (Stormont-Vail Hospital) - Minimally invasive, encapsulated follicular carcinoma  
Texas (University of Texas Medical Branch Galveston Residents) - Medullary carcinoma  
Texas (Propath Associates) - Follicular thyroid carcinoma (1); Follicular carcinoma (1)  
Texas (Lubbock) - Follicular carcinoma  
Louisiana (River Ridge) - Follicular neoplasm favor adenoma  
Mississippi (Kings Daughters Medical Center) - Follicular carcinoma with oncocytic features  
Florida (Monroe Regional Medical Center) - Follicular carcinoma  
Florida (Winter Haven Hospital) - Follicular carcinoma  
Wisconsin (Middleton) - Medullary carcinoma  
Missouri (Joplin) - Follicular variant of papillary carcinoma  
Kentucky (University of Louisville Residents) - Follicular carcinoma  
Michigan (St. Mary's Hospital) - Atypical adenoma (2)  
Michigan (Foote Hospital) - Follicular carcinoma  
Pennsylvania (Conemaugh Memorial Hospital Residents) - Follicular carcinoma  
Massachusetts (Longmeadow) - Follicular carcinoma of thyroid showing capsular and vascular invasion  
Massachusetts (Medfield) - Follicular variant of papillary carcinoma (thyroid)  
Massachusetts (Good Samaritan Medical Center) - Follicular thyroid carcinoma, angio and capsular invasion  
New York (Montefiore Medical Care Centre) - Minimally invasive follicular carcinoma  
New York (Impath) - Thyroid follicular carcinoma  
Maryland (National Naval Medical Center) - Follicular carcinoma  
Canada, Calgary (Foothills Hospital) - Papillary carcinoma, solid/trabecular type  
Japan (Shimada City) - Medullary thyroid carcinoma  
Japan (Hamamatsu University School of Medicine) - Follicular carcinoma, minimally invasive  
Japan (Kurashiki Medical School) - Follicular carcinoma (4)  
Saudi Arabia (King Khalid University Hospital) - Minimally invasive follicular carcinoma, thyroid

**DIAGNOSIS:**

**Minimally Invasive Follicular Carcinoma with Vascular Invasion, Thyroid**

T-96000, M-83303

**REFERENCES:**

- Yamashina M, et al. Follicular Neoplasms of the Thyroid Total Circumferential Evaluation of the Fibrous Capsule. *Am J Surg Pathol* 1992; 16(4):392-400.
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Orange (UCI Medical Center Residents) - Papillary carcinoma  
Mountain View (El Camino Path Assoc.) - Papillary carcinoma, tall cell variant  
Glendale (Glendale Pathology Associates) - Papillary carcinoma  
San Diego (Naval Medical Center) - Papillary thyroid carcinoma (8)  
Arizona (Phoenix Memorial Hospital) - Papillary carcinoma, tall cell variant  
Kansas (Stormont-Vail Hospital) - Papillary carcinoma of the thyroid  
Texas (University of Texas Medical Branch Galveston Residents) - Papillary carcinoma, tall cell variant  
Texas (Propath Associates) - Papillary thyroid carcinoma (1); Papillary adenocarcinoma of thyroid (1)  
Texas (Lubbock) - Papillary carcinoma  
Louisiana (River Ridge) - Papillary carcinoma (tall cell variant)  
Mississippi (Kings Daughters Medical Center) - Papillary carcinoma  
Florida (Monroe Regional Medical Center) - Papillary carcinoma  
Florida (Winter Haven Hospital) - Papillary carcinoma  
Wisconsin (Middleton) - Papillary carcinoma  
Missouri (Joplin) - Papillary carcinoma  
Kentucky (University of Louisville Residents) - Papillary thyroid carcinoma, tall cell variant  
Michigan (St. Mary's Hospital) - Papillary carcinoma, tall cell variant (2)  
Michigan (Foote Hospital) - Papillary thyroid carcinoma with tall cell features  
Pennsylvania (Conemaugh Memorial Hospital Residents) - Papillary carcinoma  
Massachusetts (Longmeadow) - Papillary carcinoma, thyroid  
Massachusetts (Medfield) - Papillary carcinoma of thyroid gland  
Massachusetts (Good Samaritan Medical Center) - Papillary thyroid carcinoma, tall cell variety  
New York (Montefiore Medical Care Centre) - Papillary carcinoma of probable thyroid origin  
New York (Impath) - Papillary carcinoma of thyroid gland  
Maryland (National Naval Medical Center) - Papillary carcinoma, tall cell variety  
Canada, Calgary (Foothills Hospital) - Papillary carcinoma, tall cell variant  
Japan (Shimada City) - Papillary carcinoma of the thyroid  
Japan (Hamamatsu University School of Medicine) - Papillary carcinoma  
Japan (Kurashiki Medical School) - Papillary carcinoma, tall-cell variant (3); Metastatic carcinoma (1)  
Saudi Arabia (King Khalid University Hospital) - Papillary carcinoma, thyroid

**DIAGNOSIS:**

**Papillary Carcinoma with Tall Cell Features, Thyroid**

T-96000, M-80503

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