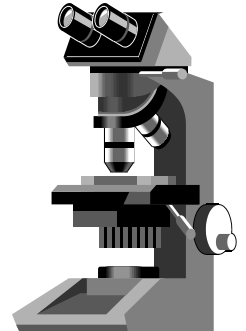


CALIFORNIA  
TUMOR TISSUE REGISTRY

“NEUROPATHOLOGY”

Minutes – Subscription B

September, 2002



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

Breast Ductal Carcinoma In Situ with Micro Invasion: A Definition Supported by a Long Term Study of 1248 Serially Sectioned Ductal Carcinomas. De Mascarel I, MacGrogan G, et al. *Cancer* 2002; 94(April 15):2134-2142.

Occult Axillary Lymph Node Metastases are of No Prognostic Significance in Breast Cancer. Millis RR, Springall R, et al. *Br J Cancer* 2002; 86(3):396-401.

Markers of Proliferative Activity are Predictors of Patient Outcome for Low-grade Endometrioid Adenocarcinoma but not Papillary Serous Carcinoma of Endometrium. Kushi AA, Lim P, et al. *Mod Pathol* 2002; 15(April):365-371.

Intraoperative Touch Preparation for Sentinel Lymph Node Biopsy: A 4-year Experience. Henry-Tillman RS, Korourian S, et al. *Ann Surg Oncol* 2002; 9(May):333-339.

Proceedings of the Consensus Conference on the Role of Sentinel Lymph Node Biopsy in Carcinoma of the Breast, April 19 to 22, 2001, Philadelphia, Pennsylvania. Schwartz GF, Guiliano AE, Veronesi U. *Cancer* 2002; 94(May):2542-2561.

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## **FILE DIAGNOSES**

**CTTR Subscription B**

**September 2002**

**Case 1:**

**Psammomatous melanotic schwannoma, thoracic cavity**  
T-Y2200, M-9560/0

**Case 2:**

**Choroid plexus papilloma, posterior fossa**  
T-Y0450, M-9390/0

**Case 3:**

**Myxopapillary ependymoma, filium terminale**  
T-X7930, M-9394/1

**Case 4:**

**Hemangioblastoma, cerebellum**  
T-X6000, M-9161/1

**Case 5:**

**Angiomatous meningioma**  
T-X2000, M-9534/0

**Case 6:**

**Psammomatous meningioma, spinal cord**  
T-X7410, M-9533/0

**Case 7:**

**Astrocytoma, grade I (of III)**  
T-X2000, M-9400/3

**Case 8:**

**Glioblastoma multiforme, brain**  
T-X2000, M-9440/3

**Case 9:**

**Medulloblastoma, suboccipital and 4<sup>th</sup> ventricle**  
T-Y0141, T-X1820, M-9470/3

**Case 10:**

**Acoustic schwannoma**  
T-X2000, M-9560/0

**Case No. 1, Accession No. 24300****September 2002**

Escondido - Melanotic schwannoma  
Glendale - Melanocytic schwannoma  
Loma Linda - Meningioma pigmented vs. schwannoma  
Loma Linda (LLUMC Residents) - Melanotic schwannoma  
Modesto (Yosemite Pathology Medical Group) - Schwannoma  
Orange (UCI Medical Center Residents) - Melanotic schwannoma, thoracic cavity  
San Francisco (UCSF Pathology) - Pigmented meningioma  
Arizona (Phoenix Memorial Hospital) - Cellular schwannoma, pigmented  
Arkansas (UAMS) - Pigmented schwannoma  
Colorado, Denver - Schwannoma  
Florida (Winter Haven Hospital) - Pigmented psammomatous meningioma  
Florida, Ocala - Melanotic schwannoma  
Georgia, Decatur - Psammomatous melanotic schwannoma  
Illinois (Marion Memorial Hospital) - Psammomatous melanotic schwannoma  
Illinois (Sarah Bush Lincoln Health Center) - Melanotic schwannoma  
Indiana, Fort Wayne - Malignant psammomatous melanotic schwannoma, left chest  
Kansas (Coffeyville Regional Medical Center) - Peripheral nerve meningioma  
Kentucky (University of Louisville Residents) - Meningioma  
Maryland (National Naval Medical Center) - Melanotic psammomatous schwannoma (10)  
Maryland (NIH Pathology) - Melanotic schwannoma, psammomatous type  
Massachusetts (Brigham & Women's Hospital) - Psammomatous melanotic schwannoma  
Michigan (St. Joseph Mercy Hospital) - Psammomatous melanotic schwannoma  
Michigan (St. Mary Mercy Hospital) - Melanocytic schwannoma (2)  
Minnesota (United Hospital) - Spindle cell melanoma  
Missouri (Ferguson's Medical Labs) - Pigmented schwannoma  
Nebraska (Good Samaritan Hospital) - Psammomatous melanotic schwannoma  
New York (Impath Inc.) - Psammomatous melanotic schwannoma  
New York (Nassau University Medical Center Residents) - Psammomatous melanotic schwannoma, thoracic cavity  
New York (New York Medical College) - Psammomatous melanotic schwannoma  
Ohio, Columbus - Cellular schwannoma with pigment  
Pennsylvania (Allegheny General Hospital) - Melanotic schwannoma  
Pennsylvania (Magee Women's Hospital) - Melanotic schwannoma  
Pennsylvania (Memorial Medical Center) - Schwannoma  
Texas (Brown & Associates Medical Laboratories) - Pigmented nerve sheath tumor  
Texas (Scott & White Memorial Hospital) - Melanotic schwannoma  
Texas, Houston - MPNST (Malignant peripheral nerve sheath tumor)  
Texas, Lubbock - Meningioma  
Texas, San Antonio - Melanotic schwannoma  
Utah (St. Mark's Hospital) - Psammomatous melanotic schwannoma  
Virginia, Alexandria - Meningioma  
Washington DC - Schwannoma, pigmented  
Canada (CUSE, Site Fleurimont) - Melanotic schwannoma  
Canada (Foothills Hospital) - Schwannoma  
China (Sir Run Run Shaw Hospital) - Psammomatous melanotic schwannoma  
Japan, Chiba - Melanotic schwannoma  
Japan (Hamamatsu University School of Medicine) - Melanotic schwannoma  
Japan (Saitama Medical School) - Melanotic schwannoma  
Japan (Self Defense Hospital) - Melanotic schwannoma  
Japan (Shiga University of Medical Science) - Melanotic schwannoma  
Japan (Shimada City Hospital) - Psammomatous melanotic schwannoma  
Puerto Rico (University of Puerto Rico) - Melanocytic schwannoma  
Singapore (Tan Tok Hospital Pte. Ltd.) - Psammomatous melanotic schwannoma, exclude Carney's syndrome

Spain (Policlinico Vigos, S.A.) - Psammomatous melanotic schwannoma  
The Netherlands, Amstelveen - Malignant melanoma

**Case 1 - Diagnosis:**

**Psammomatous melanotic schwannoma, thoracic cavity**  
T-Y2200, M-9560/0

Consultation: J.A. Carney, M.D. (Mayo Clinic, 1988): "Either Melanotic meningioma or Psammomatous melanotic schwannoma."

**Case 1 - References:**

Scheithauer BW. Tumors of the Meninges: Proposed Modifications of the World Health Organization Classification. *Acta Neuropathol (Berl)*. 1990; 80(4):343-354.  
Limas C, Tio FO. Meningeal Melanocytoma ("Melanotic Meningioma"). Its Melanocytic Origin as Revealed by Electron Microscopy. *Cancer*. 1972 Nov; 30(5):1286-1294.  
Jaffer S, Woodruff JM. Cytology of Melanotic Schwannoma in A Fine Needle Aspirate and Pleural Fluid. A Case Report. *Acta Cytol (United States)*. 2002 Nov-Dec; 44(6):1095-1100.  
Simansky DA, Aviel-Ronen S, Reder I, et al. Psammomatous Melanotic Schwannoma: Presentation of A Rare Primary Lung Tumor. *Ann Thorac Surg (United States)*. 2002 Aug; 70(2):671-672.  
Cummings TJ, Liu K, Jordan LK, et al. Fine Needle Aspiration Diagnosis of Psammomatous Melanotic Schwannoma. *Diagn Cytopathol*. 2000 Jul; 23(1):55-58.

**Case No. 2, Accession No. 21596**

**September 2002**

Escondido - Choroid plexus papilloma  
Glendale - Choroid plexus papilloma  
Loma Linda - Papillary adenoma - choroid plexus  
Loma Linda (LLUMC Residents) - Choroid plexus papilloma  
Modesto (Yosemite Pathology Medical Group) - Choroid plexus papilloma  
Orange (UCI Medical Center Residents) - Choroid plexus papilloma, brain  
San Francisco (UCSF Pathology) - Choroid plexus papilloma  
Arizona (Phoenix Memorial Hospital) - Choroid plexus papilloma  
Arkansas (UAMS) - Choroid plexus papilloma  
Colorado, Denver - Metastatic ovarian carcinoma  
Florida (Winter Haven Hospital) - Choroid plexus papilloma  
Florida, Ocala - Choroid plexus papilloma  
Georgia, Decatur - Choroid plexus papilloma  
Illinois (Marion Memorial Hospital) - Choroid plexus papilloma  
Illinois (Sarah Bush Lincoln Health Center) - Choroid plexus papilloma  
Indiana, Fort Wayne - Choroid plexus papilloma, floor of 4<sup>th</sup> ventricle  
Kansas (Coffeyville Regional Medical Center) - Choroid plexus papilloma  
Kentucky (University of Louisville Residents) - Choroid plexus papilloma  
Maryland (National Naval Medical Center) - Choroid plexus neoplasm, favor choroid plexus papilloma (10)  
Maryland (NIH Pathology) - choroid plexus papilloma  
Massachusetts (Brigham & Women's Hospital) - Choroid plexus papilloma  
Michigan (St. Joseph Mercy Hospital) - Choroid plexus papilloma  
Michigan (St. Mary Mercy Hospital) - Choroid plexus papilloma (2)  
Minnesota (United Hospital) - Choroid plexus papilloma  
Missouri (Ferguson's Medical Labs) - Choroid plexus papilloma  
Nebraska (Good Samaritan Hospital) - Choroid plexus papilloma  
New York (Impath Inc.) - Focally infarcted choroid plexus? papilloma  
New York (Nassau University Medical Center Residents) - Choroid plexus papilloma, brain  
New York (New York Medical College) - Choroid plexus papilloma  
Ohio, Columbus - Choroid plexus papilloma

Pennsylvania (Allegheny General Hospital) - Choroid plexus papilloma  
Pennsylvania (Magee Women's Hospital) - Choroid plexus papilloma  
Pennsylvania (Memorial Medical Center) - Choroid plexus papilloma  
Texas (Brown & Associates Medical Laboratories) - Choroid plexus papilloma  
Texas (Scott & White Memorial Hospital) - Choroid plexus papilloma  
Texas, Houston - Choroid papilloma  
Texas, Lubbock - Choroid plexus papilloma  
Texas, San Antonio - Choroid plexus papilloma  
Utah (St. Mark's Hospital) - Choroid plexus papilloma  
Virginia, Alexandria - Choroid plexus papilloma  
Washington DC - Choroid papilloma  
Canada (CUSE, Site Fleurimont) - Choroid plexus papilloma  
Canada (Foothills Hospital) - Choroid plexus papilloma  
China (Sir Run Run Shaw Hospital) - Choroid plexus papilloma  
Japan, Chiba - Choroid plexus papilloma  
Japan (Hamamatsu University School of Medicine) - Choroid plexus papilloma  
Japan (Saitama Medical School) - Choroid plexus papilloma, atypical  
Japan (Self Defense Hospital) - Choroid plexus papilloma  
Japan (Shiga University of Medical Science) - Choroid plexus papilloma  
Japan (Shimada City Hospital) - Choroid plexus papilloma  
Puerto Rico (University of Puerto Rico) - Choroid plexus papilloma  
Singapore (Tan Tok Hospital Pte. Ltd.) - Choroid plexus papilloma  
Spain (Policlinico Vigo, S.A.) - Choroid plexus papilloma  
The Netherlands, Amstelveen - Astrocytoma ? with partly infarcted choroid plexus

## **Case 2 - Diagnosis:**

### **Choroid plexus papilloma, posterior fossa**

T-Y0450, M-9390/0

## **Case 2 - References:**

Pai RR, Kini H, Rao VS, et al. Choroid Plexus Papilloma Diagnosed by Crush Cytology. *Diagn Cytopathol.* 2001 Sep; 25(3):165-167.  
 Corcoran GM, Frazier SR, Prayson RA. Choroid Plexus Papilloma with Osseous and Adipose Metaplasia. *Ann Diagn Pathol.* 2001 Feb; 5(1):43-47.  
 Vajtai I, Varga Z, Aguzzi A. MIB-1 Immunoreactivity Reveals Different Labelling in Low-grade and in Malignant Epithelial Neoplasms of The Choroid Plexus. *Histopathology.* 1996 Aug; 29(2):147-151.  
 Gianella-Borradori A, Zeltzer PM, Bodey B, et al. Choroid Plexus Tumors in Childhood. Response to Chemotherapy, and Immunophenotypic Profile Using A Panel of Monoclonal Antibodies. *Cancer.* 1992 Feb 1; 69(3):809-816.

## **Case No. 3, Accession No. 14949**

**September 2002**

Escondido - Ependymoma  
Glendale - Hemangioblastoma vs. microcystic meningioma  
Loma Linda - Ependymoma  
Loma Linda (LLUMC Residents) - Ependymoma (grade II)  
Modesto (Yosemite Pathology Medical Group) - Meningioma  
Orange (UCI Medical Center Residents) - Ependymoma, spinal cord  
San Francisco (UCSF Pathology) - Myxopapillary ependymoma  
Arizona (Phoenix Memorial Hospital) - Angiomatous meningioma  
Arkansas (UAMS) - Paranglioma  
Colorado, Denver - Chordoma  
Florida (Winter Haven Hospital) - Tanycytic ependymoma  
Florida, Ocala - Ependymoma  
Georgia, Decatur - Ependymoma

Illinois (Marion Memorial Hospital) - Ependymoma  
Illinois (Sarah Bush Lincoln Health Center) - Myxopapillary ependymoma  
Indiana, Fort Wayne - Ependymoma, spinal cord  
Kansas (Coffeyville Regional Medical Center) - Hemangioblastoma, spinal cord  
Kentucky (University of Louisville Residents) - Epithelial ependymoma  
Maryland (National Naval Medical Center) - Tanycytic ependymoma (6); Ependymoma, NOS (4)  
Maryland (NIH Pathology) - Myxopapillary ependymoma  
Massachusetts (Brigham & Women's Hospital) - Favor myxopapillary ependymoma  
Michigan (St Joseph Mercy Hospital) - Ependymoma  
Michigan (St. Mary Mercy Hospital) - Myxopapillary ependymoma (1); Schwannoma (1)  
Minnesota (United Hospital) - Myxopapillary ependymoma  
Missouri (Ferguson's Medical Labs) - Myxopapillary ependymoma  
Nebraska (Good Samaritan Hospital) - Myxopapillary ependymoma  
New York (Impath Inc.) - Ependymoma, ?myxopapillary  
New York (Nassau University Medical Center Residents) - Ependymoma, spinal cord  
New York (New York Medical College) - Myxopapillary ependymoma  
Ohio, Columbus - Ependymoma  
Pennsylvania (Allegheny General Hospital) - Ependymoma  
Pennsylvania (Magee Women's Hospital) - Ependymoma - myxopapillary  
Pennsylvania (Memorial Medical Center) - Ependymoma  
Texas (Brown & Associates Medical Laboratories) - Ependymoma  
Texas (Scott & White Memorial Hospital) - Ependymoma  
Texas, Houston - Myxoid myxopapillary ependymoma  
Texas, Lubbock - Cavernous hemangioma  
Texas, San Antonio - Ependymoma  
Utah (St. Mark's Hospital) - Ependymoma  
Virginia, Alexandria - Ependymoma, myxopapillary  
Washington DC - Schwannoma  
Canada (CUSE, Site Fleurimont) - Meningioma  
Canada (Foothills Hospital) - Ependymoma  
China (Sir Run Run Shaw Hospital) - Ependymoma  
Japan, Chiba - Schwannoma  
Japan (Hamamatsu University School of Medicine) - Ependymoma  
Japan (Saitama Medical School) - Ependymoma  
Japan (Self Defense Hospital) - Myxopapillary ependymoma  
Japan (Shiga University of Medical Science) - Tanycytic ependymoma  
Japan (Shimada City Hospital) - Ependymoma  
Puerto Rico (University of Puerto Rico) - Myxopapillary ependymoma  
Singapore (Tan Tok Hospital Pte. Ltd.) - Ependymoma  
Spain (Policlinico Vigo, S.A.) - Schwannoma/meningioma/ependymoma  
The Netherlands, Amstelveen - Myxopapillary ependymoma

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

#### **Myxopapillary ependymoma, filum terminale**

T-X7930, M-9394/0

Consultation: Kenneth M. Earl, M.D., AFIP, Washington DC. "Unusual myxopapillary ependymoma."

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

Rawlinson DG, Herman MM, Rubinstein LJ. The Fine Structure of A Myxopapillary Ependymoma of The Filum Terminale. *Acta Neuropathol (Berl)*. 1973 Jun 26; 25(1):1-13.  
 Specht CS, Smith TW, DeGirolami U, et al. Myxopapillary Ependymoma of The Filum Terminale. A Light and Electron Microscopic Study. *Cancer*. 1986 Jul 15; 58(2):310-317.

Wen BC, Hussey DH, Hitchon PW, et al. The Role of Radiation Therapy in The Management of Ependymomas of The Spinal Cord. *Int J Radiat Oncol Biol Phys*. 1991 Apr; 20(4):781-786.

Sonneland PR, Scheithauer BW, Onofrio BM. Myxopapillary Ependymoma. A Clinicopathologic and Immunocytochemical Study of 77 Cases. *Cancer*. 1985 Aug 15; 56(4):883-893.

**Case No. 4, Accession No. 22487**

**September 2002**

Escondido - Hemangioblastoma

Glendale - Hemangioblastoma

Loma Linda - Hemangioblastoma

Loma Linda (LLUMC Residents) - Cerebellar hemangioblastoma

Modesto (Yosemite Pathology Medical Group) - Hemangioblastoma

Orange (UCI Medical Center Residents) - Hemangioblastoma, cerebellum

San Francisco (UCSF Pathology) - Capillary hemangioblastoma

Arizona (Phoenix Memorial Hospital) - Hemangioblastoma

Arkansas (UAMS) - Hemangioblastoma

Colorado, Denver - Glioma

Florida (Winter Haven Hospital) - Hemangioblastoma

Florida, Ocala - Hemangioblastoma

Georgia, Decatur - Hemangioblastoma, rule out metastatic renal cell carcinoma

Illinois (Marion Memorial Hospital) - Hemangioblastoma

Illinois (Sarah Bush Lincoln Health Center) - Hemangioblastoma

Indiana, Fort Wayne - Hemangioblastoma, cerebellum

Kansas (Coffeyville Regional Medical Center) - Hemangioblastoma cerebellum

Kentucky (University of Louisville Residents) - Hemangioblastoma

Maryland (National Naval Medical Center) - Hemangioblastoma (10)

Maryland (NIH Pathology) - Hemangioblastoma

Massachusetts (Brigham & Women's Hospital) - So-called capillary hemangioblastoma

Michigan (St. Joseph Mercy Hospital) - Capillary hemangioblastoma

Michigan (St. Mary Mercy Hospital) - Hemangioblastoma (2)

Minnesota (United Hospital) - Hemangioblastoma

Missouri (Ferguson's Medical Labs) - Hemangioblastoma

Nebraska (Good Samaritan Hospital) - Hemangioblastoma

New York (Impath Inc.) - Capillary hemangioblastoma

New York (Nassau University Medical Center Residents) - Hemangioblastoma, cerebellum

New York (New York Medical College) - Capillary hemangioblastoma

Ohio, Columbus - Hemangioblastoma

Pennsylvania (Allegheny General Hospital) - Hemangioblastoma, VHL syndrome (von Hippel-Lindau syndrome)

Pennsylvania (Magee Women's Hospital) - Hemangioblastoma

Pennsylvania (Memorial Medical Center) - Hemangioblastoma

Texas (Brown & Associates Medical Laboratories) - Hemangioblastoma

Texas (Scott & White Memorial Hospital) - Hemangioblastoma

Texas, Houston - Hemangioblastoma

Texas, Lubbock - Hemangioblastoma

Texas, San Antonio - Hemangioblastoma

Utah (St. Mark's Hospital) - Cerebellar hemangioblastoma

Virginia, Alexandria - Hemangioblastoma

Washington DC - Renal cell carcinoma

Canada (CUSE, Site Fleurimont) - Hemangioblastoma

Canada (Foothills Hospital) - Hemangioblastoma

China (Sir Run Run Shaw Hospital) - Hemangioblastoma

Japan, Chiba - Hemangioblastoma

Japan (Hamamatsu University School of Medicine) - Hemangioblastoma

[Japan \(Saitama Medical School\)](#) - Hemangioblastoma  
[Japan \(Self Defense Hospital\)](#) - Capillary hemangioblastoma  
[Japan \(Shiga University of Medical Science\)](#) - Hemangioblastoma  
[Japan \(Shimada City Hospital\)](#) - Hemangioblastoma  
[Puerto Rico \(University of Puerto Rico\)](#) - Hemangioblastoma  
[Singapore \(Tan Tok Hospital Pte. Ltd.\)](#) - Haemangioblastoma  
[Spain \(Policlinico Vigo, S.A.\)](#) - Hemangioblastoma  
[The Netherlands, Amstelveen](#) - Haemangioblastoma

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

##### **Hemangioblastoma, cerebellum**

T-X6000, M-9161/1

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

Palmer JJ. Haemangioblastomas. A Review of 81 Cases. *Acta Neurochir (Wien)*. 1972; 27(3):125-148.  
 Hufnagel TJ, Kim JH, True LD, et al. Immunohistochemistry of Capillary Hemangioblastoma. Immunoperoxidase-Labeled Antibody Staining Resolves the Differential Diagnosis with Metastatic Renal Cell Carcinoma, But Does Not Explain The Histogenesis of The Capillary Hemangioblastoma. *Am J Surg Pathol*. 1989 Mar; 13(3):207-216.  
 Kamitani H, Masuzawa H, Sato J, et al. Capillary Hemangioblastoma: Histogenesis of Stromal Cells. *Acta Neuropathol (Berl)*. 1987; 73(4):370-378.  
 Bohling T, Hatva E, Kujala M, et al. Expression of Growth Factors and Growth Factor Receptors in Capillary Hemangioblastoma. *J Neuropathol Exp Neurol*. 1996 May; 55(5):522-527.

#### **Case No. 5, Accession No. 8845**

**September 2002**

[Escondido](#) - Atypical meningioma  
[Glendale](#) - Myxocystic meningioma  
[Loma Linda](#) - Angiomatous meningioma  
[Loma Linda \(LLUMC Residents\)](#) - Angiomatous meningioma  
[Modesto \(Yosemite Pathology Medical Group\)](#) - Microcystic meningioma  
[Orange \(UCI Medical Center Residents\)](#) - Microcystic meningioma, dura  
[San Francisco \(UCSF Pathology\)](#) - Microcystic meningioma  
[Arizona \(Phoenix Memorial Hospital\)](#) - Angiomatous meningioma  
[Arkansas \(UAMS\)](#) - Meningioma  
[Colorado, Denver](#) - Meningioma  
[Florida \(Winter Haven Hospital\)](#) - Meningioma  
[Florida, Ocala](#) - Meningioma  
[Georgia, Decatur](#) - Meningioma, microcystic features  
[Illinois \(Marion Memorial Hospital\)](#) - Angiomatous meningioma  
[Illinois \(Sarah Bush Lincoln Health Center\)](#) - Meningioma with focal atypia  
[Indiana, Fort Wayne](#) - Angiomatous meningioma  
[Kansas \(Coffeyville Regional Medical Center\)](#) - “Angioblastic” meningioma dura  
[Kentucky \(University of Louisville Residents\)](#) - Cystic meningioma  
[Maryland \(National Naval Medical Center\)](#) - Angiomatous meningioma (10)  
[Maryland \(NIH Pathology\)](#) - Meningioma, choroid vs. angiomatoid  
[Massachusetts \(Brigham & Women’s Hospital\)](#) - Meningioma (microcystic/angiomatous)  
[Michigan \(St. Joseph Mercy Hospital\)](#) - Angiomatous meningioma  
[Michigan \(St. Mary Mercy Hospital\)](#) - Meningioma (2)  
[Minnesota \(United Hospital\)](#) - Hemangioendothelioma vs. meningioma  
[Missouri \(Ferguson’s Medical Labs\)](#) - Vascular (?vascular meningioma ?hemangioma?)  
[Nebraska \(Good Samaritan Hospital\)](#) - Hemangioendothelioma  
[New York \(Impath Inc.\)](#) - Angiomatous meningioma  
[New York \(Nassau University Medical Center Residents\)](#) - Microcystic meningioma, dura (brain)  
[New York \(New York Medical College\)](#) - Microcystic meningioma



Ohio, Columbus - Angiomatous meningioma  
Pennsylvania (Allegheny General Hospital) - Meningioma, microcystic variant  
Pennsylvania (Magee Women's Hospital) - Microcystic meningioma  
Pennsylvania (Memorial Medical Center) - Microcystic/angiomatous meningioma  
Texas (Brown & Associates Medical Laboratories) - Meningioma  
Texas (Scott & White Memorial Hospital) - Microcystic meningioma  
Texas, Houston - Angiomatous meningioma  
Texas, Lubbock - Microcystic meningioma  
Texas, San Antonio - Microcystic meningioma  
Utah (St. Mark's Hospital) - Microcystic meningioma  
Virginia, Alexandria - Meningioma  
Washington DC - Meningioma, hemangioblastic  
Canada (CUSE, Site Fleurimont) - Microcystic meningioma  
Canada (Foothills Hospital) - Angiomatous meningioma  
China (Sir Run Run Shaw Hospital) - Microcystic meningioma  
Japan, Chiba - Microcystic meningioma  
Japan (Hamamatsu University School of Medicine) - Meningioma, microcystic  
Japan (Saitama Medical School) - Microcystic meningioma  
Japan (Self Defense Hospital) - Lipomatous meningioma  
Japan (Shiga University of Medical Science) - Microcystic meningioma  
Japan (Shimada City Hospital) - Angiomatous meningioma  
Puerto Rico (University of Puerto Rico) - Microcystic meningioma  
Singapore (Tan Tok Hospital Pte. Ltd.) - Microcystic meningioma  
Spain (Policlinico Visa, S.A.) - Vascular meningioma/hemangiomablastoma  
The Netherlands, Amstelveen - Angiomatous meningioma

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

##### **Angiomatous meningioma**

T-X2000, M-9534/0

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

Artlich A, Schmidt D. Immunohistochemical Profile of Meningiomas and Their Histological Subtypes. *Hum Pathol.* 1990 Aug; 21(8):843-849.  
 Holden J, Dolman CL, Churg A. Immunohistochemistry of Meningiomas Including the Angioblastic Type. *J Neuropathol Exp Neurol.* 1987 Jan; 46(1):50-56.  
 Kepes JJ. Presidential Address: The Histopathology of Meningiomas. A Reflection of Origins and Expected Behavior? *J Neuropathol Exp Neurol.* 1986 Mar; 45(2):95-107.  
 Scheithauer BW. Tumors of The Meninges: Proposed Modifications of The World Health Organization Classification. *Acta Neuropathol (Berl).* 1990; 80(4):343-354.

#### **Case No. 6, Accession No. 13121**

**September 2002**

Escondido - Psammomatous meningioma  
Glendale - Psammomatous meningioma  
Loma Linda - Psammomatous meningioma  
Loma Linda (LLUMC Residents) - Psammomatous meningioma  
Modesto (Yosemite Pathology Medical Group) - Psammomatous meningioma  
Orange (UCI Medical Center Residents) - Psammomatous meningioma, dura of spinal cord  
San Francisco (UCSF Pathology) - Psammomatous meningioma  
Arizona (Phoenix Memorial Hospital) - Psammomatous meningioma  
Arkansas (UAMS) - Psammomatous meningioma  
Colorado, Denver - Meningioma  
Florida (Winter Haven Hospital) - Psammomatous meningioma  
Florida, Ocala - Meningioma

Georgia, Decatur - Meningioma, psammomatous  
Illinois (Marion Memorial Hospital) - Psammomatous meningioma  
Illinois (Sarah Bush Lincoln Health Center) - Psammomatous meningioma  
Indiana, Fort Wayne - Psammomatous meningioma  
Kansas (Coffeyville Regional Medical Center) - “Psammomatous” meningioma, dura of spinal cord  
Kentucky (University of Louisville Residents) - Psammomatous meningioma  
Maryland (National Naval Medical Center) - Psammomatous meningioma (10)  
Maryland (NIH Pathology) - Psammomatous meningioma  
Massachusetts (Brigham & Women’s Hospital) - Psammomatous meningioma  
Michigan (St. Joseph Mercy Hospital) - Psammomatous meningioma  
Michigan (St. Mary Mercy Hospital) - Meningioma (2)  
Minnesota (United Hospital) - Psammomatous meningioma  
Missouri (Ferguson’s Medical Labs) - Intraspinal meningioma  
Nebraska (Good Samaritan Hospital) - Meningioma, psammomatous  
New York (Impath Inc.) - Psammomatous meningioma  
New York (Nassau University Medical Center Residents) - Psammomatous meningioma, dura (spinal cord)  
New York (New York Medical College) - Psammomatous meningioma  
Ohio, Columbus - Psammomatous meningioma  
Pennsylvania (Allegheny General Hospital) - Meningioma, psammomatous type  
Pennsylvania (Magee Women’s Hospital) - Psammomatous meningioma  
Pennsylvania (Memorial Medical Center) - Psammomatous meningioma  
Texas (Brown & Associates Medical Laboratories) - Psammomatous  
Texas (Scott & White Memorial Hospital) - Psammomatous meningioma  
Texas, Houston - Psammomatous meningioma  
Texas, Lubbock - Psammomatous meningioma  
Texas, San Antonio - Psammomatous meningioma  
Utah (St. Mark’s Hospital) - Psammomatous meningioma  
Virginia, Alexandria - Meningioma, psammomatous  
Washington DC - Meningioma, psammomatous  
Canada (CUSE, Site Fleurimont) - Psammomatous meningioma  
Canada (Foothills Hospital) - Psammomatous meningioma  
China (Sir Run Run Shaw Hospital) - Psammomatous meningioma  
Japan, Chiba - Psammomatous meningioma  
Japan (Hamamatsu University School of Medicine) - Meningioma, psammomatous  
Japan (Saitama Medical School) - Psammomatous meningioma  
Japan (Self Defense Hospital) - Psammomatous meningioma  
Japan (Shiga University of Medical Science) - Psammomatous meningioma  
Japan (Shimada City Hospital) - Psammomatous meningioma  
Puerto Rico (University of Puerto Rico) - Psammomatous meningioma  
Singapore (Tan Tok Hospital Pte. Ltd.) - Psammomatous meningioma  
Spain (Policlinico Vigo, S.A.) - Psammomatous meningioma  
The Netherlands, Amstelveen - Psammomatous meningioma

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

##### **Psammomatous meningioma, spinal cord**

T-X7410, M-9533/0

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

Dumanski JP, Carlborn E, Collins VP, et al. Deletion Mapping of a Locus on Human Chromosome 22 Involved in the Oncogenesis of Meningioma. *Proc Natl Acad Sci U S A*. 1987 Dec; 84(24):9275-9279.  
 de la Monte SM, Flickinger J, Linggood RM. Histopathologic Features Predicting Recurrence of Meningiomas Following Subtotal Resection. *Am J Surg Pathol*. 1986 Dec; 10(12):836-843  
 Artlich A, Schmidt D. Immunohistochemical Profile of Meningiomas and Their Histological Subtypes. *Hum Pathol*. 1990 Aug; 21(8):843-849.  
 Calogero JA, Moossy J. Extradural Spinal Meningiomas. Report of Four Cases. *J Neurosurg*. 1972 Oct 37(4):442-447.

**Case No. 7, Accession No. 13788**

**September 2002**

Escondido - Astrocytoma

Glendale - Gliosis

Loma Linda - Well differentiated astrocytoma

Loma Linda (LLUMC Residents) - Low grade astrocytoma

Modesto (Yosemite Pathology Medical Group) - Well-differentiated diffuse astrocytoma

Orange (UCI Medical Center Residents) - Astrocytoma, grade II, brain

Arizona (Phoenix Memorial Hospital) - Astrocytoma, fibrillary, grade I

Arkansas (UAMS) - Ganglioglioma

Colorado, Denver - Glioma

Florida (Winter Haven Hospital) - Gliosis

Florida, Ocala - Reactive gliosis

Georgia, Decatur - Cerebral infarct

Illinois (Marion Memorial Hospital) - Diffuse astrocytoma, grade I (out of III)

Illinois (Sarah Bush Lincoln Health Center) - High grade malignancy with associated infarction and reactive gliosis

Indiana, Fort Wayne - A-V (arteriovenous) malformation

Kansas (Coffeyville Regional Medical Center) - Epidermal cyst - benign, brain

Kentucky (University of Louisville Residents) - Ganglioglioma

Maryland (National Naval Medical Center) -

Maryland (NIH Pathology) - Pilocytic astrocytoma

Massachusetts (Brigham & Women's Hospital) - Tanycytic ependymoma

Michigan (St Joseph Mercy Hospital) - Astrocytoma

Michigan (St. Mary Mercy Hospital) - Pilocytic astrocytoma (1); Cystic infarct (1)

Minnesota (United Hospital) - ?Low grade glioma

Missouri (Ferguson's Medical Labs) - Gliomatosis cerebri

Nebraska (Good Samaritan Hospital) - Infarct

New York (Impath Inc.) - Low grade astrocytoma, ?pilocytic

New York (Nassau University Medical Center Residents) - Pilocytic astrocytoma, brain

New York (New York Medical College) - Oligodendroglioma

Ohio, Columbus - Astrocytoma

Pennsylvania (Allegheny General Hospital) - Cortical dysgenesis

Pennsylvania (Magee Women's Hospital) - Pilocytic astrocytoma

Pennsylvania (Memorial Medical Center) - Cavitary gliosis-post radiation

Texas (Brown & Associates Medical Laboratories) - Gliosis [?]

Texas (Scott & White Memorial Hospital) - Low grade astrocytoma vs. radiation necrosis

Texas, Houston - Glioma

Texas, Lubbock - Grade III astrocytoma

Utah (St. Mark's Hospital) - Pilocytic astrocytoma

Virginia, Alexandria - Low grade astrocytoma

Washington DC - Low grade astrocytoma, autolyzed

Canada (CUSE, Site Fleurimont) - Well differentiated fibrillary astrocytoma

Canada (Foothills Hospital) - Cortical dysplasia

China (Sir Run Run Shaw Hospital) - Cerebral infarct

Japan, Chiba - Protoplasmic astrocytoma

Japan (Hamamatsu University School of Medicine) - Diffuse astrocytoma, grade II/IV

Japan (Saitama Medical School) - Toxoplasmosis (?)

Japan (Self Defense Hospital) - Demyelinating tumor

Japan (Shiga University of Medical Science) - Radionecrosis

Japan (Shimada City Hospital) - Fibrillary astrocytoma

Singapore (Tan Tok Hospital Pte. Ltd.) - Cerebral infarction  
Spain (Policlinico Vigo, S.A.) - Glial cyst/cystic gliosis  
The Netherlands, Amstelveen - Well-differentiated fibrillary astrocytoma

**Case 7 - Diagnosis:**

**Astrocytoma, grade I (of III)**  
T-X2000, M-9400/3

**Case 7 - References:**

Vertosick FT Jr, Selker RG, Arena VC. Survival of Patients with Well-differentiated Astrocytomas Diagnosed in the Era of Computed Tomography. *Neurosurgery*. 1991 Apr; 28(4):496-501  
Daumas-Duport C, Scheithauer B, O'Fallon J, et al. Grading of Astrocytomas. A Simple and Reproducible Method. *Cancer*. 1988 Nov 15; 62(10):2152-2165.  
VandenBerg SR. Current Diagnostic Concepts of Astrocytic Tumors. *J Neuropathol Exp Neurol*. 1992 Nov; 51(6):644-657.  
Salzman M, Scholtz H, Kaplan RS, Kulik S. Long-term Survival in Patients with Malignant Astrocytoma. *Neurosurgery*. 1994 Feb; 34(2):213-220.

**Case No. 8, Accession No. 24525**

**September 2002**

Escondido - Astrocytoma  
Glendale - Anaplastic astrocytoma  
Loma Linda - Protoplasmic astrocytoma, high grade  
Loma Linda (LLUMC Residents) - High grade (III) astrocytoma  
Modesto (Yosemite Pathology Medical Group) - GBM (glioblastoma multiforme)  
Orange (UCI Medical Center Residents) - Anaplastic astrocytoma, brain  
San Francisco (UCSF Pathology) - Pleomorphic Xanthoastrocytoma  
Arizona (Phoenix Memorial Hospital) - Anaplastic astrocytoma, grade III  
Arkansas (UAMS) - Ganglioglioma with atypical features  
Colorado, Denver - Infarct  
Florida (Winter Haven Hospital) - Pilocytic astrocytoma  
Florida, Ocala - Anaplastic astrocytoma  
Georgia, Decatur - Anaplastic astrocytoma, with gemistocytes  
Illinois (Marion Memorial Hospital) - Malignant astrocytoma, gemistocytic, grade II (out of 3)  
Illinois (Sarah Bush Lincoln Health Center) - Ependymoma  
Indiana, Fort Wayne - Hemangiopericytoma  
Kansas (Coffeyville Regional Medical Center) - Anaplastic astrocytoma  
Kentucky (University of Louisville Residents) - Glioblastoma multiforme  
Maryland (National Naval Medical Center) - Glioblastoma multiforme (10)  
Maryland (NIH Pathology) - Glioblastoma multiforme  
Massachusetts (Brigham & Women's Hospital) - Glioblastoma multiforme  
Michigan (St Joseph Mercy Hospital) - Glioblastoma multiforme  
Michigan (St. Mary Mercy Hospital) - High grade astrocytoma (2)  
Minnesota (United Hospital) - High grade glioma consistent with glioblastoma multiforme  
Missouri (Ferguson's Medical Labs) - Glioblastoma multiforme  
Nebraska (Good Samaritan Hospital) - Gemistocytic astrocytoma  
New York (Impath Inc.) - Glioblastoma multiforme  
New York (Nassau University Medical Center Residents) - Gemistocytic astrocytoma, brain  
New York (New York Medical College) - Glioblastoma multiforme  
Ohio, Columbus - Astrocytoma  
Pennsylvania (Allegheny General Hospital) - Anaplastic astrocytoma (gliomatosis?)  
Pennsylvania (Magee Women's Hospital) - Glioblastoma multiforme  
Pennsylvania (Memorial Medical Center) - Gemistocytic astrocytoma  
Texas (Brown & Associates Medical Laboratories) - Glioblastoma multiforme  
Texas (Scott & White Memorial Hospital) - Anaplastic astrocytoma

Texas, Houston - Epithelioid hemangioendothelioma  
Texas, Lubbock - Glioblastoma multiforme  
Texas, San Antonio - Anaplastic astrocytoma  
Utah (St. Mark's Hospital) - GBM (glioblastoma multiforme)  
Virginia, Alexandria - Anaplastic oligodendroglioma  
Washington DC - Glioblastoma  
Canada (CUSE, Site Fleurimont) - Ganglioglioma  
Canada (Foothills Hospital) - Small cell GBM (glioblastoma multiforme)  
China (Sir Run Run Shaw Hospital) - Gemistocytic astrocytoma  
Japan, Chiba - Glioblastoma multiforme  
Japan (Hamamatsu University School of Medicine) - Anaplastic astrocytoma, grade III/IV  
Japan (Saitama Medical School) - Anaplastic astrocytoma  
Japan (Self Defense Hospital) - Gemistocytic astrocytoma  
Japan (Shiga University of Medical Science) - Meningioangiomas  
Japan (Shimada City Hospital) - Anaplastic astrocytoma  
Puerto Rico (University of Puerto Rico) - Diffuse astrocytoma  
Singapore (Tan Tok Hospital Pte. Ltd.) - Astrocytoma, WHO grade III at least  
Spain (Policlinico Vigo, S.A.) - Anaplastic gemistocytic astrocytoma  
The Netherlands, Amstelveen - Anaplastic astrocytoma

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

##### **Glioblastoma multiforme, brain**

T-X2000, M-9440/3

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

Gerosa MA, Talarico D, Fognani C, et al. Overexpression of N-ras Oncogene and Epidermal Growth Factor Receptor Gene in Human Glioblastomas. *J Natl Cancer Inst.* 1989 Jan 4; 81(1):63-67.  
 Neuwelt EA, Howieson J, Frenkel EP, et al. Therapeutic Efficacy of Multiagent Chemotherapy with Drug Delivery Enhancement by Blood-Brain Barrier Modification in Glioblastoma. *Neurosurgery.* 1986 Oct; 19(4):573-582.  
 Chandler KL, Prados MD, Malec M, et al. Long-term Survival in Patients with Glioblastoma Multiforme. *Neurosurgery.* 1993 May; 32(5):716-720  
 Hulshof MC, Koot RW, Schimmel EC, et al. Prognostic Factors in Glioblastoma Multiforme. 10 Years Experience of A Single Institution. *Strahlenther Onkol.* 2001 Jun; 177(6):283-290.

#### **Case No. 9, Accession No. 18556**

**September 2002**

Escondido - Medulloblastoma  
Glendale - Desmoplastic medulloblastoma  
Loma Linda - Medulloblastoma  
Loma Linda (LLUMC Residents) - PNET (Primitive neuroectodermal tumor)/medulloblastoma  
Modesto (Yosemite Pathology Medical Group) - Neuroblastoma  
Orange (UCI Medical Center Residents) - Medulloblastoma, suboccipital tumor from the 4<sup>th</sup> ventricle  
San Francisco (UCSF Pathology) - Medulloblastoma  
Arizona (Phoenix Memorial Hospital) - Anaplastic ependymoma  
Arkansas (UAMS) - Desmoplastic medulloblastoma  
Colorado, Denver - Meningioma  
Florida (Winter Haven Hospital) - medulloblastoma  
Florida, Ocala - Medulloblastoma  
Georgia, Decatur - Medulloblastoma  
Illinois (Marion Memorial Hospital) - Medulloblastoma  
Illinois (Sarah Bush Lincoln Health Center) - Anaplastic ependymoma vs. medulloblastoma  
Indiana, Fort Wayne - Medulloblastoma, PNET (primitive neuroectodermal tumor)  
Kansas (Coffeyville Regional Medical Center) - Medulloblastoma  
Kentucky (University of Louisville Residents) - Germinoma

Maryland (National Naval Medical Center) - Medulloblastoma (10)  
Maryland (NIH Pathology) - Medulloblastoma  
Massachusetts (Brigham & Women's Hospital) - Desmoplastic medulloblastoma  
Michigan (St. Joseph Mercy Hospital) - Medulloblastoma  
Michigan (St. Mary Mercy Hospital) - Neuroblastoma (1); Primitive neuroectodermal tumor (1)  
Minnesota (United Hospital) - Neuroblastoma  
Missouri (Ferguson's Medical Labs) - Medulloblastoma  
Nebraska (Good Samaritan Hospital) - Medulloblastoma  
New York (Impath Inc.) - Medulloblastoma  
New York (Nassau University Medical Center Residents) - Medulloblastoma, brain (4<sup>th</sup> ventricle)  
New York (New York Medical College) - Medulloblastoma  
Ohio, Columbus - Ependymoma  
Pennsylvania (Allegheny General Hospital) - Medulloblastoma  
Pennsylvania (Magee Women's Hospital) - Primitive neuroectodermal tumor  
Pennsylvania (Memorial Medical Center) - Medulloblastoma  
Texas (Brown & Associates Medical Laboratories) - Medulloblastoma  
Texas (Scott & White Memorial Hospital) - Medulloblastoma  
Texas, Houston - Medulloblastoma  
Texas, Lubbock - Medulloblastoma  
Texas, San Antonio - Medullo  
Utah (St. Mark's Hospital) - Medulloblastoma?  
Virginia, Alexandria - Medulloblastoma  
Washington DC - Medulloblastoma  
Canada (CUSE, Site Fleurimont) - Hemangiopericytoma  
Canada (Foothills Hospital) - Medulloblastoma  
China (Sir Run Run Shaw Hospital) - Medulloblastoma  
Japan, Chiba - Malignant meningioma  
Japan (Hamamatsu University School of Medicine) - Medulloblastoma  
Japan (Saitama Medical School) - Desmoplastic medulloblastoma  
Japan (Self Defense Hospital) - Medulloblastoma  
Japan (Shiga University of Medical Science) - Medulloblastoma  
Japan (Shimada City Hospital) - Medulloblastoma  
Puerto Rico (University of Puerto Rico) - Primitive neuroectodermal tumor (PNET)  
Singapore (Tan Tok Hospital Pte. Ltd.) - Medulloblastoma  
Spain (Policlinico Vigo, S.A.) - Medulloblastoma/anaplastic ependymoma  
The Netherlands, Amstelveen - Desmoplastic medulloblastoma

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

##### **Medulloblastoma, suboccipital and 4<sup>th</sup> ventricle**

T-Y0141, T-X1820, M-9470/3

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

Bigner SH, Vogelstein B. Cytogenetics and Molecular Genetics of Malignant Gliomas and Medulloblastoma. *Brain Pathol.* 1990 Sep; 1(1):12-8  
 Chatty EM, Earle KM. Medulloblastoma. A Report of 201 Cases with Emphasis on the Relationship of Histologic Variants to Survival. *Cancer.* 1971 Oct; 28(4):977-983.  
 Kunschner LJ, Kuttesch J, Hess K, et al. Survival and Recurrence Factors in Adult Medulloblastoma: The M.D. Anderson Cancer Center Experience from 1978 to 1998. *Neuro-oncol.* 2001 Jul; 3(3):167-173.  
 Kumar PV, Hosseinzadeh M, Bedayat GR. Cytologic Findings of Medulloblastoma in Crush Smears. *Acta Cytol.* 2001 Jul-Aug; 45(4):542-546.

#### **Case No. 10, Accession No. 13791**

Escondido - Schwannoma

**September 2002**

Glendale - “Ancient” schwannoma  
Loma Linda - VIII Nerve tumor (schwannoma)  
Loma Linda (LLUMC Residents) - Acoustic schwannoma  
Modesto (Yosemite Pathology Medical Group) - Acoustic schwannoma  
Orange (UCI Medical Center Residents) - Schwannoma, right cerebellar pontine angle  
San Francisco (UCSF Pathology) - Schwannoma with ancient change  
Arizona (Phoenix Memorial Hospital) - Pleomorphic xanthoastrocytoma  
Arkansas (UAMS) - Schwannoma  
Colorado, Denver - Meningioma  
Florida (Winter Haven Hospital) - Pilocytic astrocytoma  
Florida, Ocala - Schwannoma  
Georgia, Decatur - Schwannoma with focal ancient change  
Illinois (Marion Memorial Hospital) - Schwannoma  
Illinois (Sarah Bush Lincoln Health Center) - Acoustic schwannoma  
Indiana, Fort Wayne - Schwannoma, cranial nerve (7)  
Kansas (Coffeyville Regional Medical Center) - Schwannoma (neurilemoma)  
Kentucky (University of Louisville Residents) - Schwannoma  
Maryland (National Naval Medical Center) - Schwannoma (10)  
Maryland (NIH Pathology) - Schwannoma  
Massachusetts (Brigham & Women’s Hospital) - Schwannoma  
Michigan (St. Joseph Mercy Hospital) - Schwannoma  
Michigan (St. Mary Mercy Hospital) - Schwannoma (2)  
Minnesota (United Hospital) - Schwannoma  
Missouri (Ferguson’s Medical Labs) - Schwannoma, acoustic  
Nebraska (Good Samaritan Hospital) - Schwannoma  
New York (Impath Inc.) - Acoustic schwannoma  
New York (Nassau University Medical Center Residents) - Acoustic schwannoma, right cerebellar pontine angle  
New York (New York Medical College) - Schwannoma  
Ohio, Columbus - Schwannoma  
Pennsylvania (Allegheny General Hospital) - Schwannoma  
Pennsylvania (Magee Women’s Hospital) - Schwannoma  
Pennsylvania (Memorial Medical Center) - Schwannoma  
Texas (Brown & Associates Medical Laboratories) - Schwannoma  
Texas (Scott & White Memorial Hospital) - Acoustic schwannoma  
Texas, Houston - Ancient schwannoma  
Texas, Lubbock - Pilocytic astrocytoma  
Texas, San Antonio - Schwannoma  
Utah (St. Mark’s Hospital) - Schwannoma (acoustic)  
Virginia, Alexandria - Schwannoma  
Washington DC - Oligodendroglioma  
Canada (CUSE, Site Fleurimont) - “Xanthomatous” lesion  
Canada (Foothills Hospital) - Schwannoma  
China (Sir Run Run Shaw Hospital) - Neurilemoma  
Japan, Chiba - Schwannoma  
Japan (Hamamatsu University School of Medicine) - Schwannoma  
Japan (Saitama Medical School) - Schwannoma  
Japan (Self Defense Hospital) - Schwannoma  
Japan (Shiga University of Medical Science) - Schwannoma  
Japan (Shimada City Hospital) - Schwannoma  
Japan (University of Puerto Rico) - Schwannoma  
Singapore (Tan Tok Hospital Pte. Ltd.) - Schwannoma  
Spain (Policlinico Vigo, S.A.) - Schwannoma  
The Netherlands, Amstelveen - Oligoastrocytoma?

**Case 10 - Diagnosis:**

**Acoustic schwannoma**

T-X2000, M-9560/0

**Case 10 - References:**

- Mulvihill JJ, Parry DM, Sherman JL, et al. NIH Conference. Neurofibromatosis 1 (Recklinghausen Disease) and Neurofibromatosis 2 (Bilateral Acoustic Neurofibromatosis). An Update. *Ann Intern Med.* 1990 Jul 1; 113(1):39-52.
- Hirose T, Sano T, Hizawa K. Ultrastructural Localization of S-100 Protein in Neurofibroma. *Acta Neuropathol (Berl).* 1986; 69(1-2):103-110.
- Martuza RL, Ojemann RG. Bilateral Acoustic Neuromas: Clinical Aspects, Pathogenesis, and Treatment. *Neurosurgery.* 1982 Jan; 10(1):1-12.
- Shu HH, Mirowitz SA, Wippold FJ 2<sup>nd</sup>. Neurofibromatosis: MR Imaging Findings Involving the Head and Spine. *AJR Am J Roentgenol.* 1993 Jan; 160(1):159-164.
- Chen AF, Samy RN, Gantz BJ. Cerebellopontine Angle Tumor Composed of Schwann and Meningeal Proliferations. *Arch Otolaryngol Head Neck Surg.* 2001 Nov; 127(11):1385-1389.