

**California Tumor Tissue Registry's
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"Pediatric Surgical Pathology"

Case 1

This is a 2.2 cm elbow mass from a 13 y/o boy. The surgeon indicated that the tumor was adherent to muscle.

Dx: Juvenile hyaline fibromatosis

Santa Rosa (Santa Rosa Memorial Hospital) - Inclusion body fibromatosis (2); Fibroma of tendon sheath (1)
Woodland Hills (Kaiser Permanente) - Nodular fasciitis
Alabama, Birmingham - Fibromatosis
Alabama (Norwood Clinic) - Fibroma
Arizona (Integrated Pathology) - Fibromatosis with hyalinized areas
Arkansas (The Laboratory of Pathology) - Juvenile hyaline fibromatosis
Georgia, Atlanta - Nodular fasciitis
Kansas (Peterson Laboratory Services) - Fibroma
Massachusetts, Peabody - Nodular fasciitis
North Carolina (TriPath Oncology) - Fibromatosis
Texas, Victoria - Myofibromatosis
Washington, Bothell - Hyalinized fibromatosis
Hong Kong (Hong Kong Baptist Hospital) - Fibromatosis
Singapore (Freelance/Locum) - Nodular fasciitis
The Netherlands, Amstelveen - Fibromatosis

Juvenile hyalin fibromatosis. Kitano Y. Arch Dermatol 1976 Jan;112(1): p86-8.

Two cases of juvenile hyalin fibromatosis. Some histological, electron microscopic, and tissue culture observations. Kitano Y; Horiki M; Aoki T; Sagami S. Arch Dermatol 1972 Dec;106(6): p877-83.

Juvenile hyaline fibromatosis. A 15-year follow-up. Quintal D; Jackson R. Arch Dermatol 1985 Aug;121(8): p1062-3.

A novel point mutation in the gene encoding capillary morphogenesis protein 2 in a Japanese patient with juvenile hyaline fibromatosis. Hatamochi A; Sasaki T; Kawaguchi T; Suzuki H; Yamazaki S. Br J Dermatol 2007 Nov;157(5): p1037-9.

Juvenile hyaline fibromatosis and infantile systemic hyalinosis overlap associated with a novel mutation in capillary morphogenesis protein-2 gene. Antaya RJ; Cajaiba MM; Madri J; Lopez MA; Ramirez MC; Martignetti JA; Reyes-Mugica M. Am J Dermatopathol 2007 Feb;29(1): p99-103.

Juvenile non-hyaline fibromatosis: juvenile hyaline fibromatosis without prominent hyaline changes. Anadolu RY; Oskay T; Ozsoy N; Erdem C. J Cutan Pathol 2005 Mar;32(3): p235-9.

Case 2

An 8 y/o boy had an 11 cm right testicular mass. It was focally hemorrhagic and cystic. Desmin and myogenin positive. S100 and synaptophysin were negative.

Dx: Rhabdomyosarcoma, paratesticular

Santa Rosa (Santa Rosa Memorial Hospital) - Rhabdomyosarcoma (2); Embryonal rhabdomyosarcoma (1)
Woodland Hills (Kaiser Permanente) - Rhabdomyosarcoma (embryonal)
Alabama, Birmingham - Embryonal rhabdomyosarcoma
Alabama (Norwood Clinic) - Rhabdomyosarcoma
Arizona (Integrated Pathology) - Rhabdomyosarcoma
Arkansas (The Laboratory of Pathology) - Rhabdomyosarcoma
Georgia, Atlanta - Rhabdomyosarcoma
Kansas (Peterson Laboratory Services) - Embryonal rhabdomyosarcoma
Massachusetts, Peabody - Rhabdomyosarcoma, embryonal, testis
North Carolina (TriPath Oncology) - Embryonal rhabdomyosarcoma
Texas, Victoria - Rhabdomyosarcoma
Washington, Bothell - Rhabdomyosarcoma
Hong Kong (Hong Kong Baptist Hospital) - Embryonal rhabdomyosarcoma
Singapore (Freelance/Locum) - Embryonal rhabdomyosarcoma
The Netherlands, Amstelveen - Rhabdomyosarcoma

Paratesticular spindle cell rhabdomyosarcoma diagnosed by fine needle aspiration cytology: a case report. Daneshbod Y; Monabati A; Kumar PV; Rastegar M. Acta Cytol 2005 May-Jun;49(3): p331-4.

Is alveolar histotype a prognostic factor in paratesticular rhabdomyosarcoma? The experience of Italian and German Soft Tissue Sarcoma Cooperative Group. Ferrari A; Bisogno G; Casanova M; Brecht IB; Alaggio R; Cecchetto G; Provenzi M; Koscielniak E; Treuner J; Carli M. Comment: Pediatr Blood Cancer. 2004 Aug; 43(2):180. Pediatr Blood Cancer 2004 Feb;42(2): p134-8.

Adult paratesticular rhabdomyosarcoma. Haga K; Kashiwagi A; Nagamori S; Yamashiro K. Nat Clin Pract Urol 2005 Aug;2(8): p398-402; quiz 403.

Spindle cell rhabdomyosarcoma in adults. Nascimento AF; Fletcher CD. Am J Surg Pathol 2005 Aug;29(8): p1106-13.

Embryonal paratesticular rhabdomyosarcoma: a case of young adult patient who has inguinal relapse. Kosan M; Gonulalan U; Ugurlu O; Seckin S; Adsan O. Int Urol Nephrol 2007;39(4): p1159-61.

Case 3

A young boy had this superficial nodule on the forearm.

Dx: Fibrous Hamartoma of infancy

Santa Rosa (Santa Rosa Memorial Hospital) - Epidermal nevus (3)
Woodland Hills (Kaiser Permanente) - Lipoma/nevus lipomatosis superficialis
Alabama, Birmingham - Hamartoma

Alabama (Norwood Clinic) - Lipoma/nevus sebaceous
Arizona (Integrated Pathology) - Fibrous hamartoma of infancy
Arkansas (The Laboratory of Pathology) - Fibrous hamartoma of infancy
Georgia, Atlanta - Lipofibromatosis
Kansas (Peterson Laboratory Services) - Linear epidermal nevus
Massachusetts, Peabody - Lipoma
North Carolina (TriPath Oncology) - Fibrous hamartoma
Texas, Victoria - Epidermal nevus
Washington, Bothell - Fibroepithelial polyp
Hong Kong (Hong Kong Baptist Hospital) - Fibrous hamartoma of infancy
Singapore (Freelance/Locum) - Nevus lipomatosis
The Netherlands, Amstelveen - Hamartoma of infancy

Fibrous hamartoma of infancy. Eight additional cases and a review of the literature. Paller AS; Gonzalez-Crussi F; Sherman JO. Arch Dermatol 1989 Jan;125(1): p88-91.

Cytologic diagnosis of fibrous hamartoma of infancy: a case report of a rare soft tissue lesion. Gupta R; Singh S. Acta Cytol 2008 Mar-Apr;52(2): p201-3. Comment: Acta Cytol. 2008 Mar-Apr; 52(2):123.

Fibrous hamartoma of infancy: an Italian multi-institutional experience. Carretto E; Dall'Igna P; Alaggio R; Siracusa F; Granata C; Ferrari A; Cecchetto G. Am Acad Dermatol 2006 May;54(5): p800-3.

Cutaneous changes in fibrous hamartoma of infancy. Grynspan D; Meir K; Senger C; Ball NJ. J Cutan Pathol 2007 Jan;34(1): p39-43.

A complex translocation (6; 12; 8)(q25; q24.3; q13) in a fibrous hamartoma of infancy. Rougemont AL; Fetni R; Murthy S; Fournet JC. Cancer Genet Cytogenet 2006 Dec;171(2): p115-8.

Cytologic diagnosis of fibrous hamartoma of infancy: a case report. Mohanty SK; Dey P. Diagn Cytopathol 2003 May;28(5): p272-3.

Case 4

A two year old girl was found to have a mass in the axilla.

Dx: Myopericytoma/Myofibroma

Santa Rosa (Santa Rosa Memorial Hospital) - Juvenile aponeurotic fibromatosis (2); Myofibroma (1)
Woodland Hills (Kaiser Permanente) - Myofibroma
Alabama, Birmingham - Myofibroma
Alabama (Norwood Clinic) - Granuloma annulare
Arizona (Integrated Pathology) - Benign myofibroblastic tumor
Arkansas (The Laboratory of Pathology) - Myofibroblastoma
Georgia, Atlanta - Myofibroma
Kansas (Peterson Laboratory Services) - Infantile myofibroma
Massachusetts, Peabody - Leiomyoma, areolar type
North Carolina (TriPath Oncology) - Myofibroma
Texas, Victoria - Pseudo-rheumatoid nodule
Washington, Bothell - Myxoid fibroma

Hong Kong (Hong Kong Baptist Hospital) - Myofibroma
Singapore (Freelance/Locum) - Dermatomyofibroma

Myopericytoma: a unifying term for a spectrum of tumours that show overlapping features with myofibroma. A review of 14 cases. Dray MS; McCarthy SW; Palmer AA; Bonar SF; Stalley PD; Marjoniemi V; Millar E; Scolyer RA J Clin Pathol 2006 Jan;59(1): p67-73.

Myopericytoma of skin and soft tissues: clinicopathologic and immunohistochemical study of 54 cases. Mentzel T; Dei Tos AP; Sapi Z; Kutzner H. Am J Surg Pathol 2006 Jan;30(1): p104-13.

Angioleiomyoma: a clinicopathologic and immunohistochemical reappraisal with special reference to the correlation with myopericytoma. Matsuyama A; Hisaoka M; Hashimoto H. Hum Pathol 2007 Apr;38(4): p645-51.

Infantile myofibromatosis. Gopal M; Chahal G; Al-Rifai Z; Eradi B; Ninan G; Nour S. Pediatr Surg Int 2008 Mar;24(3): p287-91.

Involuting solitary cutaneous infantile myofibroma and thrombocytopaenia: a previously unreported clinical association. Leon-Villapalos J; Wolfe K; Calonje E; Kangesu L. J Plast Reconstr Aesthet Surg 2007;60(11): p1260-2.

Case 5

A 15 y/o girl had a 2.0 cm lobulated mass involving the right upper arm.

Dx: Plexiform fibrohistiocytic neoplasm/Plexiform FH

Santa Rosa (Santa Rosa Memorial Hospital) - Rhabdoid tumor, nos (2); Rhabdomyosarcoma (1)

Woodland Hills (Kaiser Permanente) - Epithelioid sarcoma

Alabama, Birmingham - Rhabdomyosarcoma

Alabama (Norwood Clinic) - Fibroma of tendon sheath

Arizona (Integrated Pathology) - Plexiform fibrohistiocytic neoplasm

Arkansas (The Laboratory of Pathology) - Epithelioid sarcoma, proximal type

Georgia, Atlanta - Reticulohistiocytoma

Kansas (Peterson Laboratory Services) - Reticulohistiocytoma

Massachusetts, Peabody - Cellular plexiform schwannoma

North Carolina (TriPath Oncology) - Plexiform fibrohistiocytic tumor

Texas, Victoria - Inflammatory fibrous histiocytoma

Washington, Bothell - Giant cell fibrous histiocytoma

Hong Kong (Hong Kong Baptist Hospital) - Epithelioid sarcoma

Singapore (Freelance/Locum) - Juvenile xanthogranuloma

Long-standing subcutaneous nodule in a young woman. Plexiform fibrohistiocytic tumor. Joseph AK; Tschen JA; Dickson JE. Arch Dermatol 1995 Feb;131(2): p212-3, 215-6.

Plexiform fibrohistiocytic tumor: a brief review. Taher A; Pushpanathan C. Arch Pathol Lab Med 2007 Jul;131(7): p1135-8.

An update on plexiform fibrohistiocytic tumor and addition of 66 new cases from the Armed Forces Institute of Pathology, in honor of Franz M. Enzinger,

MD. Moosavi C; Jha P; Fanburg-Smith JC. Ann Diagn Pathol 2007 Oct;11(5): p313-9.

Plexiform fibrohistiocytic tumor in three children. Jafarian F; McCuaig C; Kokta V; Hatami A; Savard P. Pediatr Dermatol 2006 Jan-Feb;23(1): p7-12.

Case 6

A 2 y/o girl presented with a 2 month hx of a 2.5 cm abdominal wall mass. At surgery it was noted to be attached to the rectus fascia by a small pedicle.

Dx: Giant cell fibroblastoma

Santa Rosa (Santa Rosa Memorial Hospital) - Benign fibrous tumor, nos (1); Fibromatosis, rule out neural origin (1); Angiosarcoma of soft tissue (1)

Woodland Hills (Kaiser Permanente) - Lipoblastoma

Alabama, Birmingham - Giant cell angiofibroma

Alabama (Norwood Clinic) - Infantile digital fibroma

Arizona (Integrated Pathology) - Giant cell fibroblastoma

Arkansas (The Laboratory of Pathology) - Giant cell fibroblastoma

Georgia, Atlanta - Giant cell fibroblastoma

Kansas (Peterson Laboratory Services) - Giant cell fibroblastoma

Massachusetts, Peabody - Proliferative fasciitis

North Carolina (TriPath Oncology) - Giant cell fibroblastoma

Texas, Victoria - Giant cell fibroblastoma

Washington, Bothell - Giant cell fibroma

Hong Kong (Hong Kong Baptist Hospital) - Giant cell fibroblastoma

Singapore (Freelance/Locum) - Giant cell fibroblastoma

The Netherlands, Amstelveen - Giant cell fibroblastoma

Genomic gains of COL1A1-PDFGB occur in the histologic evolution of giant cell fibroblastoma into dermatofibrosarcoma protuberans. Macarenco RS; Zamolyi R; Franco MF; Nascimento AG; Abott JJ; Wang X; Erickson-Johnson MR; Oliveira AM. Genes Chromosomes Cancer 2008 Mar;47(3): p260-5.

Giant cell fibroblastoma: an update and addition of 86 new cases from the Armed Forces Institute of Pathology, in honor of Dr. Franz M. Enzinger. Jha P; Moosavi C; Fanburg-Smith JC. Ann Diagn Pathol 2007 Apr;11(2): p81-8.

Histogenetic relations between giant cell fibroblastoma and dermatofibrosarcoma protuberans. CD34 staining showing the spectrum and a simulator. Harvell JD; Kilpatrick SE; White WL. Am J Dermatopathol 1998 Aug;20(4): p339-45.

Fine-needle aspiration biopsy features in a case of giant cell fibroblastoma of the chest wall. Maitra A; Timmons CF; Siddiqui MT; Saboorian MH. Arch Pathol Lab Med 2001 Aug;125(8): p1091-4.

Giant-cell fibroblastoma and dermatofibrosarcoma protuberans: the same tumoral spectrum? Report of two cases of association in children. Galinier P; Scheiner C; Bardot J; Vasse D; Rimareix F; Faissal T; Magalon G. Eur J Pediatr Surg 2000 Dec;10(6): p390-4.

Case 7

This is a forearm skin nodule from a 5 y/o boy.

Dx: Solitary Reticulohistiocytoma (“Epithelioid histiocytoma”)

Santa Rosa (Santa Rosa Memorial Hospital) - Spitz nevus (3)
Woodland Hills (Kaiser Permanente) - Epithelioid spitz nevus
Alabama, Birmingham - Cutaneous fibrous histiocytoma
Alabama (Norwood Clinic) - Rhabdomyoma
Arizona (Integrated Pathology) - Reticulohistiocytoma
Arkansas (The Laboratory of Pathology) - Solitary reticulohistiocytoma
Georgia, Atlanta - Juvenile xanthogranuloma
Kansas (Peterson Laboratory Services) - Epithelioid fibrous histiocytoma
Massachusetts, Peabody - Proliferative fasciitis
North Carolina (TriPath Oncology) - Cellular dermatofibroma
Texas, Victoria - Angiomatoid fibrous histiocytoma
Washington, Bothell - AFX
Hong Kong (Hong Kong Baptist Hospital) - Reticulohistiocytoma
Singapore (Freelance/Locum) - Fibrous histiocytoma, angiomatoid
The Netherlands, Amstelveen - Reticulohistiocytoma

Reticulohistiocytoma (solitary epithelioid histiocytoma): a clinicopathologic and immunohistochemical study of 44 cases. Miettinen M; Fetsch JF. Am J Surg Pathol 2006 Apr;30(4): p521-8.

Epithelioid cell histiocytoma: A report of 10 cases including a new cellular variant. Glusac EF, Barr RJ, Everett MA, et al. Am J Surg Pathol. 1994;18:583-590.

Solitary reticulohistiocytosis (reticulohistiocytoma) of the skin in children: report of two cases. Caputo R; Grimalt R. Arch Dermatol 1992 May;128(5): p698-9.

Solitary papule on the forearm. Solitary reticulohistiocytoma. Cobb MW; Barber FA. Arch Dermatol 1990 May;126(5): p667, 669-70.

Electron microscopic study of reticulohistiocytoma. An unusual case of congenital, self-healing reticulohistiocytosis. Hashimoto K; Pritzker MS. Arch Dermatol 1973 Feb;107(2): p263-70.

Case 8

A nasal sinus mass was found in a 13 y/o boy complaining of nasal obstruction.

Dx: Nasopharyngeal angiofibroma

Santa Rosa (Santa Rosa Memorial Hospital) - Angiofibroma (2); Nasopharyngeal angiofibroma (1)
Woodland Hills (Kaiser Permanente) - Nasopharyngeal angiofibroma
Alabama, Birmingham - Nasopharyngeal angiofibroma
Alabama (Norwood Clinic) - Angiofibroma
Arizona (Integrated Pathology) - Nasopharyngeal angiofibroma

Arkansas (The Laboratory of Pathology) - Nasopharyngeal angiofibroma
Georgia, Atlanta - Nasopharyngeal angiofibroma
Kansas (Peterson Laboratory Services) - Nasopharyngeal angiofibroma
Massachusetts, Peabody - Nasopharyngeal angiofibroma
North Carolina (TriPath Oncology) - Juvenile nasal angiofibroma
Texas, Victoria - Nasopharyngeal angiofibroma
Washington, Bothell - Nasopharyngeal angiofibroma
Hong Kong (Hong Kong Baptist Hospital) - Nasopharyngeal angiofibroma
Singapore (Freelance/Locum) - Nasopharyngeal angiofibroma
The Netherlands, Amstelveen - Angiofibroma

Steroid hormone receptor expression in nasopharyngeal angiofibromas. Consistent expression of estrogen receptor beta. Montag AG; Tretiakova M; Richardson M. Am J Clin Pathol 2006 Jun;125(6): p832-7.

Juvenile nasopharyngeal angiofibromas in Denmark 1981-2003: diagnosis, incidence, and treatment. Glad H; Vainer B; Buchwald C; Petersen BL; Theilgaard SA; Bonvin P; Lajer C; Jakobsen J. Acta Otolaryngol 2007 Mar;127(3): p292-9.

Cellular differentiations and structural characteristics in nasopharyngeal angiofibromas. An electron-microscopic study. Stiller D; Katenkamp D; Kuttner K. Virchows Arch A Pathol Anat Histol 1976 Sep 21;371(3): p273-82.

Nasopharyngeal angiofibroma. Kau R; Tanna M; Misra S; Contreras AL. Ear Nose Throat J 2008 May;87(5): p256.

Lipomatous variant of nasopharyngeal angiofibroma: a case report. Guo G; Paulino AF. Arch Otolaryngol Head Neck Surg 2002 Apr;128(4): p448-50. Comment: Arch Otolaryngol Head Neck Surg. 2003 Apr;129(4):499.

Nasopharyngeal angiofibroma: an APC-gene-associated tumor? Guertl B; Beham A; Zechner R; Stammberger H; Hoefler G. Hum Pathol 2000 Nov;31(11): p1411-3. Comment: Hum Pathol. 2001 Apr; 32(4):455.

Nasopharyngeal angiofibroma: true neoplasm or vascular malformation? Beham A; Beham-Schmid C; Regauer S; Aubock L; Stammberger H. Adv Anat Pathol 2000 Jan;7(1): p36-46.

Case 9

A baby boy presented at birth with a mass involving the left back and anterior chest. An emergency C section was performed because of dystocia. The mass was 12 x 6 x 4 cm.

Dx: Congenital neuroectodermal tumor (PNET)

Santa Rosa (Santa Rosa Memorial Hospital) - Congenital mesenchymal tumor, nos (2); Very poorly preserved specimen, favor sarcoma (1)
Woodland Hills (Kaiser Permanente) - Rhabdomyosarcoma
Alabama, Birmingham - Malignant neoplasm with primitive features
Alabama (Norwood Clinic) - Angioma
Arizona (Integrated Pathology) - PNET
Arkansas (The Laboratory of Pathology) - PNET
Georgia, Atlanta - Poorly differentiated neoplasm, rule out acute myeloid leukemia

Kansas (Peterson Laboratory Services) - Angiomas
Massachusetts, Peabody - Cellular capillary hemangioma
North Carolina (TriPath Oncology) - Ewing's/PNET
Texas, Victoria - Congenital angiomas
Washington, Bothell - Angiofibroma
Hong Kong (Hong Kong Baptist Hospital) - Infantile hemangioma
Singapore (Freelance/Locum) - Ewing's sarcoma
The Netherlands, Amstelveen - PNET

Askin tumors in children: a report of four cases. Taneli C; Genc A; Erikci V; Yuce G; Balik E. Eur J Pediatr Surg 1998 Oct;8(5): p312-4.

Fine needle aspiration cytology of the Ewing's sarcoma family of tumors. Sahu K; Pai RR; Khadilkar UN. Acta Cytol 2000 May-Jun;44(3): p332-6.

Immunohistochemical detection of FLI-1 protein expression: a study of 132 round cell tumors with emphasis on CD99-positive mimics of Ewing's sarcoma/primitive neuroectodermal tumor. Folpe AL; Hill CE; Parham DM; O'Shea PA; Weiss SW. Am J Surg Pathol 2000 Dec;24(12): p1657-62.

Ewing's sarcoma: diagnostic, prognostic, and therapeutic implications of molecular abnormalities. Burchill SA. J Clin Pathol 2003 Feb;56(2): p96-102.

Ewing tumors in infants. van den Berg H; Dirksen U; Ranft A; Jurgens H. Pediatr Blood Cancer 2008 Apr;50(4): p761-4.

Case 10

An 18 y/o man was found to have a large mass in the tibia.

Dx: Ewing sarcoma

Santa Rosa (Santa Rosa Memorial Hospital) - Ewing's sarcoma (3)
Woodland Hills (Kaiser Permanente) - Ewing's sarcoma/PNET
Alabama, Birmingham - Ewing's sarcoma
Alabama (Norwood Clinic) - Ewing's sarcoma
Arizona (Integrated Pathology) - Ewing's sarcoma
Arkansas (The Laboratory of Pathology) - Ewing's sarcoma
Georgia, Atlanta - Ewing's sarcoma
Kansas (Peterson Laboratory Services) - Ewing's sarcoma
Massachusetts, Peabody - Ewing's sarcoma
North Carolina (TriPath Oncology) - Ewing's/PNET
Texas, Victoria - Vascular sarcoma
Washington, Bothell - Ewing's sarcoma
Hong Kong (Hong Kong Baptist Hospital) - Small round cell tumor, favour alveolar rhabdomyosarcoma
Singapore (Freelance/Locum) - Alveolar rhabdomyosarcoma
The Netherlands, Amstelveen - Ewing's sarcoma/PNET

Limb salvage in Ewing's sarcoma of the distal lower extremity. San-Julian M; Duarte J; de Rada PD; Sierrasesumaga L. Foot Ankle Int 2008 Jan;29(1): p22-8.

Ewing sarcoma: historical perspectives, current state-of-the-art, and opportunities for targeted therapy in the future. Ludwig JA. Curr Opin Oncol 2008 Jul;20(4): p412-8.

Evidence of neural differentiation in a case of post-therapy primitive neuroectodermal tumor/Ewing sarcoma of bone. Collini P; Mezzelani A; Modena P; Dagrada P; Tamborini E; Luksch R; Gronchi A; Navarria P; Sozzi G; Pilotti S. Am J Surg Pathol 2003 Aug;27(8): p1161-6.

Do pathological fractures influence survival and local recurrence rate in bony sarcomas? Bramer JA; Abudu AA; Grimer RJ; Carter SR; Tillman RM. Eur J Cancer 2007 Sep;43(13): p1944-51.