



CALIFORNIA  
TUMOR TISSUE REGISTRY

“GENERAL PATHOLOGY”

Minutes – Subscription B

November, 2004



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

Physiology and Pathophysiology of Dendritic Cells. Wright-Browne V, McClain KL, Talpaz M, et al. *Hum Pathol*, 1997 May; 28(5):563-79.

Dendritic Cells as Immunologic Adjuvants for the Treatment of Cancer. Editorial. *J Clin Oncol*, 2000 Dec 1; 18(23):3879-82.

Gastro-Oesophageal Reflux Monitoring: Review and Consensus Report on Detection and Definitions of Acid, Non-acid, and Gas Reflux. Sifrim D, Castell D, Dent J, Kahrilas PJ. *Gut*, 2004; 53:1024-31.

Lysosomal Storage Disorders: The Need for Better Pediatric Recognition and Comprehensive Care. Wilcox WR. *J Pediatr*, 2004 May;S3-S14.

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## **FILE DIAGNOSES**

(Preferably submitted on website at [www.cttr.org](http://www.cttr.org). Click “subscriptions”, then “submit answers”.)

**CTTR Subscription B**

**November, 2004**

**Case 1:**

**Merkel cell carcinoma, forearm  
T-02630, M-80423**

**Case 2:**

**T-cell rich, B-cell lymphoma, spleen  
T-07000, M-95903**

**Case 3:**

**Plasma cell neoplasm (plasmacytoma/multiple myeloma), pleura  
T-29000, M-97311**

**Case 4:**

**Intra-abdominal desmoplastic small cell tumor, peri-renal  
T-71160, M-80423**

**Case 5:**

**Phylloides tumor, low grade, with focal adenosis and lactational changes, breast  
T-04010, M-90201**

**Case 6:**

**Metaplastic carcinoma/carcinosarcoma, breast  
T-04010, M-89803**

**Case 7:**

**Low grade myxoid tumor, probably sarcoma (NOS), stomach  
T-63000, M-88003**

**Case 8:**

**Clear cell carcinoma, ovary  
T-87000, M-8310/3**

**Case 9:**

**Malignant mixed Mullerian tumor (“MMMT”, “carcinosarcoma”), uterus  
T-82000, M-8980/3**

**Case 10:**

**Chondrosarcoma, Grade I (of III), pelvis  
T-Y6000, M-9220/3**

Escondido - Merkel cell (neuroendocrine) carcinoma  
Glendale - Merkel cell carcinoma  
Granada Hills - Merkel cell tumor  
Loma Linda (LLUMC Residents) - Merkel cell carcinoma  
Los Angeles (LAC-USC Residents) - Merkel cell carcinoma  
Orange (UCI Medical Center Residents) - Merkel cell carcinoma  
San Francisco (San Francisco General Hospital) - Merkel cell carcinoma  
Arizona, Phoenix - Merkel cell carcinoma  
Arkansas (University of Arkansas Medical Center) - Cutaneous neuroendocrine (Merkel) carcinoma  
Colorado, Denver - Merkel cell tumor  
Florida (Winter Haven Hospital) - Merkel cell carcinoma  
Georgia, Decatur - Merkel cell carcinoma  
Illinois (Heartland Regional Medical Center) - Merkel cell carcinoma  
Kansas (Coffeyville Regional Medical Center) - Merkel cell tumor vs metastatic small cell tumor  
Kansas, Manhattan - Merkel cell carcinoma  
Louisiana (LSUHSC Pathology Residents Study Group) - Merkel cell carcinoma  
Maryland (Johns Hopkins Medical Center) - Merkel cell carcinoma  
Maryland (National Naval Medical Center) - Merkel cell carcinoma  
Maryland (University of Maryland) - Merkel cell carcinoma  
Michigan (Pathology Services of West Michigan) - Merkel cell carcinoma  
Michigan (St. Joseph Mercy Hospital) - Merkel cell carcinoma  
Nevada, Las Vegas - Merkel cell carcinoma  
New York (Nassau University Medical Center) - Merkel cell carcinoma  
New York (State University of New York at Stony Brook) - Merkel cell carcinoma  
New York (Westchester Medical Center) - Merkel cell tumor  
North Carolina (Wake Forest University School of Medicine) - Merkel cell carcinoma  
Pennsylvania (Allegheny General Hospital) - Merkel cell tumor  
Pennsylvania (Hahnemann University Hospital) - Merkel cell carcinoma  
Texas (Scott & White Memorial Hospital) - Merkel cell carcinoma  
Texas, Lubbock - Merkel cell tumor  
Texas, Sugarland - Merkel cell carcinoma, Bowenoid actinic keratosis  
Washington, D.C. - Merkel cell tumor  
Canada (University of Calgary, Foothills Hospital) - Merkel cell carcinoma  
Canada (Woodstock General Hospital) - Merkel cell carcinoma  
China (Sir Run Run Shaw Hospital) - Merkel cell carcinoma  
Italy, Naples - Merkel cell carcinoma  
Japan (Asahi General Hospital) - Neuroendocrine carcinoma of skin  
Japan (Hamamatsu University School of Medicine) - Merkel cell carcinoma  
Japan (Gunma University Hospital) - Merkel cell carcinoma  
Puerto Rico (University of Puerto Rico) - Merkel cell carcinoma  
Qatar, Doha - Merkel cell carcinoma  
Spain (Povisa) - Merkel cell carcinoma  
The Netherlands, Amstelveen - Merkel cell carcinoma

**Case 1 - Diagnosis:****Merkel cell carcinoma, forearm****T-02630, M-80423****Case 1 - References:**

Pfeifer T, Weinberg H, Brady MS: Lymphatic Mapping For Merkel Cell Carcinoma. *J Am Acad Dermatol*, 1997 Oct; 37(4):650-1.  
 Cooper L, Debono R, Alsanjari N, Al-Nafussi A: Merkel Cell Tumour With Leiomyosarcomatous Differentiation. *Histopathology* 2000 Jun; 36(6):540-3.  
 Longo MI, Nghiem P: Merkel Cell Carcinoma Treatment With Radiation: A Good Case Despite No Prospective Studies. *Arch Dermatol*, 2003 Dec; 139(12):1641-3.  
 Kabukcuoglu F, Sungun A, Polat N, et al: Fine Needle Aspiration Cytology Of Merkel Cell Carcinoma. *Acta Cytol*, 2003 Mar-Apr; 47(2):311-3.  
 Herbst A, Haynes HA, Nghiem P: The Standard Of Care For Merkel Cell Carcinoma Should Include Adjuvant Radiation And Lymph Node Surgery. *J Am Acad Dermatol*, 2002 Apr; 46(4):640-2.

Escondido - Peripheral T-cell lymphoma  
Glendale - ? Reactive lymphoid hyperplasia ? Extramedullary hematopoiesis  
Granada Hills - T-cell lymphoma  
Loma Linda (LLUMC Residents) - B-cell lymphoma, favor marginal zone lymphoma by morphology  
Los Angeles (LAC-USC Residents) - Splenic marginal zone lymphoma  
Orange (UCI Medical Center Residents) - Marginal zone lymphoma  
San Francisco (San Francisco General Hospital) - B-cell lymphoma  
Arizona, Phoenix - Splenic T-cell lymphoma  
Arkansas (University of Arkansas Medical Center) - T-cell rich large B-cell lymphoma, spleen  
Colorado, Denver - Marginal zone lymphoma  
Florida (Winter Haven Hospital) - Mantle cell lymphoma  
Georgia, Decatur - Splenic marginal zone lymphoma  
Illinois (Heartland Regional Medical Center) - Malignant lymphoma, small lymphocytic type  
Kansas (Coffeyville Regional Medical Center) - Mantle cell lymphoma  
Kansas, Manhattan - Marginal zone lymphoma  
Louisiana (LSUHSC Pathology Residents Study Group) - B-cell lymphoma, splenic marginal zone  
Maryland (Johns Hopkins Medical Center) - Low grade B-cell lymphoma, favor marginal zone  
Maryland (National Naval Medical Center) - Splenic lymphoma with villous lymphocytosis  
Maryland (University of Maryland) - Peripheral T-cell lymphoma, NOS  
Michigan (Pathology Services of West Michigan) - Lymphoma  
Michigan (St. Joseph Mercy Hospital) - Mantle cell lymphoma  
Nevada, Las Vegas - Low grade B-cell lymphoma  
New York (Nassau University Medical Center) - Mantle zone lymphoma, spleen  
New York (State University of New York at Stony Brook) - Marginal zone B-cell lymphoma  
New York (Westchester Medical Center) - Small lymphocytic lymphoma (SLL/CLL)  
North Carolina (Wake Forest University School of Medicine) - Splenic marginal zone lymphoma  
Pennsylvania (Allegheny General Hospital) - Follicular lymphoma, B-cell  
Pennsylvania (Hahnemann University Hospital) - Marginal zone lymphoma of spleen  
Texas (Scott & White Memorial Hospital) - Mantle zone lymphoma  
Texas, Lubbock - Malignant lymphoma, small lymphocytic  
Texas, Sugarland - Small lymphocytic lymphoma, extramedullary hematopoiesis  
Washington, D.C. - Littoral cell angioma  
Canada (University of Calgary, Foothills Hospital) - Small lymphocytic lymphoma/CLL  
Canada (Woodstock General Hospital) - T-cell rich B-cell lymphoma involving the spleen  
China (Sir Run Run Shaw Hospital) - Non-Hodgkin's malignant lymphoma  
Italy, Naples - Low grade B-cell lymphoma  
Japan (Asahi General Hospital) - Consistent with hepatosplenic lymphoma  
Japan (Hamamatsu University School of Medicine) - Malignant lymphoma, small lymphocytic lymphoma  
Japan (Gunma University Hospital) - Splenic marginal zone lymphoma  
Puerto Rico (University of Puerto Rico) - Small B-cell lymphoproliferative disorder (DDx: Hairy cell leukemia)  
Qatar, Doha - Low grade B-cell lymphoma of spleen of probable marginal zone type  
Spain (Povisa) - Splenic marginal zone B-cell lymphoma, + T-cell lymphoma in lymph node  
The Netherlands, Amstelveen - Follicular center lymphoma (?)

**Case 2 - Diagnosis:**

**T-cell rich, B-cell lymphoma, spleen**  
**T-07000, M-95903**

**Outside Consultation:** Bharat N. Nathwani, M.D., University of Southern California: Diffuse Large B-Cell Lymphoma, T-Cell Rich Large B-Cell Variant.

**Case 2 - References:**

Betman HF, Vardiman JW, Lau J: T-Cell Rich B-Cell Lymphoma Of The Spleen. *Am J Surg Pathol*, 1994 Mar; 18(3):323-4.  
 Tajima K, Fukase N, Shiono T, et al: An Autopsied Case Of T-Cell Rich B-Cell Lymphoma With General Involvement. *Intern Med*, 1995 Apr; 34(4):243-6.  
 Tsigiotis P, Economopoulos T, Rontogianni D, et al: T-Cell Rich B-Cell Lymphoma: Analysis Of Clinical Features, Response To Treatment, Survival And Comparison With Diffuse Large B-Cell Lymphoma. *Oncology*, 2001; 61(4):257-64.  
 Kamarashev J, Dummer R, Schmidt MH, et al: Primary Cutaneous T-Cell Rich B-Cell Lymphoma And Hodgkin's Disease In A Patient With Gardner's Syndrome. *Dermatology*, 2000; 201(4):362-5.

Ripp JA, Loieue DC, Chan W, et al: T-Cell Rich B-Cell Lymphoma: Clinical Distinctiveness And Response To Treatment In 45 Patients. *Leuk Lymphoma*, 2002 Aug; 43(8):1573-80.

**Case No. 3 Accession No. 29712**

**November, 2004**

Escondido - Lymphoplasmacytoid lymphoma  
Glendale - Plasmacytoma  
Granada Hills - Plasmacytoma  
Loma Linda (LLUMC Residents) - Pleural-based plasmacytoma  
Los Angeles (LAC-USC Residents) - Malignant plasma cell neoplasm/plasmacytoma  
Orange (UCI Medical Center Residents) - Body cavity lymphoma  
San Francisco (San Francisco General Hospital) - Plasma cell myeloma  
Arizona, Phoenix - Extra-osseous plasmacytoma, IgG Kappa  
Arkansas (University of Arkansas Medical Center) - Plasmacytoma, pleura  
Colorado, Denver - Plasmacytoma  
Florida (Winter Haven Hospital) - Anaplastic myeloma  
Georgia, Decatur - Plasmacytoma of pleura  
Illinois (Heartland Regional Medical Center) - Plasma cell myeloma  
Kansas (Coffeyville Regional Medical Center) - Plasma cell myeloma  
Kansas, Manhattan - Anaplastic plasmacytoma  
Louisiana (LSUHSC Pathology Residents Study Group) - Plasmacytoma vs multiple myeloma  
Maryland (Johns Hopkins Medical Center) - Plasmacytoma  
Maryland (National Naval Medical Center) - Primary effusion lymphoma  
Maryland (University of Maryland) - Extramedullary plasmacytoma (Note: The bone marrow needs to be examined to rule out true multiple myeloma)  
Michigan (Pathology Services of West Michigan) - Plasmacytoma  
Michigan (St. Joseph Mercy Hospital) - Anaplastic large B-cell lymphoma  
Nevada, Las Vegas - Diffuse large B-cell lymphoma  
New York (Nassau University Medical Center) - Plasma cell neoplasm  
New York (State University of New York at Stony Brook) - Extra-osseous plasmacytoma  
New York (Westchester Medical Center) - Plasmacytoma/Multiple myeloma  
North Carolina (Wake Forest University School of Medicine) - Plasmacytoma  
Pennsylvania (Allegheny General Hospital) - Anaplastic plasmacytoma  
Pennsylvania (Hahnemann University Hospital) - Plasmacytoma  
Texas (Scott & White Memorial Hospital) - Malignant plasmacytoma  
Texas, Lubbock - Immunoblastic carcinoma  
Texas, Sugarland - Plasmacytoma  
Washington, D.C. - Plasmacytoid lymphoma  
Canada (University of Calgary, Foothills Hospital) - Plasmacytoma  
Canada (Woodstock General Hospital) - Multiple myeloma of pleura  
China (Sir Run Run Shaw Hospital) - Plasmacytoma  
Italy, Naples - Plasmacytoma/Myeloma  
Japan (Asahi General Hospital) - Plasmacytoma of pleura  
Japan (Hamamatsu University School of Medicine) - Myeloma  
Japan (Gunma University Hospital) - Extramedullary plasmacytoma  
Puerto Rico (University of Puerto Rico) - Plasma cell dyscrasia (DDx: Plasmacytoma, Multiple myeloma)  
Qatar, Doha - High grade plasmacytoma/Multiple myeloma  
Spain (Povisa) - Plasmacytoma  
The Netherlands, Amstelveen - Extramedullary plasmacytoma

**CASE 3 - Diagnosis:**

**Plasma cell neoplasm (plasmacytoma/multiple myeloma), pleura  
T-29000, M-97311**

**Case 3 - References:**

Magrangeas F, Nasser V, Avet-Loiseau H, et al: Gene Expression Profiling Of Multiple Myeloma Reveals Molecular Portraits In Relation To The Pathogenesis Of The Disease. *Blood*, 2003 Jun 15; 101(12):4998-5006.

- Harrison CJ, Mazzullo H, Cheung KL, et al: Cytogenetics Of Multiple Myeloma: Interpretation Of Fluorescence In-Situ Hybridization Results. *Br J Haematol*, 2003 Mar; 120(6):944-52.
- Li T, Farinhas J, Chun KJ, Freeman LM: Discordant Uptake On Ga-67 And Tc-99m MDP Scintigraphy In A Patient With Multiple Myeloma: An Indication Of Poor Prognosis. *Clin Nucl Med*, 2003 Apr; 28(4):322-24.
- Desikan R, Barlogie B, Sethi R, et al: Infection -- An Underappreciated Cause Of Bone Pain In Multiple Myeloma. *Br J Haematol*, 2003 Mar; 120(6):1047-50.
- Terpos E, Apperley JF, Samson D, et al: Autologous Stem Cell Transplantation In Multiple Myeloma: Improved Survival In Nonsecretory Multiple Myeloma But Lack Of Influence Of Age, Status At Transplant, Previous Treatment And Conditioning Regimen: A Single-Centre Experience In 127 Patients. *Bone Marrow Transplant*, 2003 Feb; 31(3):163-70.
- Ortega MM, Nascimento H, Melo MB, et al: Polymorphisms Of Glutathione S-Transferase Mu1 (GSTM1) And Thet1 (GSTT1) Genes In Multiple Myeloma. *Acta Haematol*, 2003; 109(2):108-9.

#### Case No. 4 Accession No. 29640

November, 2004

Escondido - Intra-abdominal desmoplastic small cell tumor  
Glendale - Epithelioid leiomyosarcoma vs epithelioid angiomyolipoma  
Granada Hills - Hemangiopericytoma  
Loma Linda (LLUMC Residents) - Desmoplastic small round cell tumor  
Los Angeles (LAC-USC Residents) - Endometrial stromal sarcoma  
Orange (UCI Medical Center Residents) - Epithelioid leiomyosarcoma  
San Francisco (San Francisco General Hospital) - Rhabdomyosarcoma  
Arizona, Phoenix - Desmoplastic small round cell tumor  
Arkansas (University of Arkansas Medical Center) - Metastatic epithelioid leiomyosarcoma, perirenal fat  
Colorado, Denver - Peripheral neuroendocrine tumor  
Florida (Winter Haven Hospital) - Epithelioid leiomyosarcoma, low grade  
Georgia, Decatur - Desmoplastic small round cell tumor  
Illinois (Heartland Regional Medical Center) - Epithelioid leiomyosarcoma  
Kansas (Coffeyville Regional Medical Center) - Endometrial stromal sarcoma  
Kansas, Manhattan - Hyalinizing rhabdomyosarcoma  
Louisiana (LSUHSC Pathology Residents Study Group) - Desmoplastic small round cell tumor  
Maryland (Johns Hopkins Medical Center) - Rhabdomyosarcoma  
Maryland (National Naval Medical Center) - Smooth muscle tumor of unknown malignant potential  
Maryland (University of Maryland) - Peripheral neuroectodermal tumor  
Michigan (Pathology Services of West Michigan) - Neuroendocrine lesion ?  
Michigan (St. Joseph Mercy Hospital) - Rhabdomyosarcoma  
New York (Nassau University Medical Center) - Alveolar rhabdomyosarcoma  
New York (State University of New York at Stony Brook) - Intra-abdominal desmoplastic small round cell tumor  
New York (Westchester Medical Center) - Rhabdomyosarcoma vs desmoplastic round small cell tumor vs PNET  
North Carolina (Wake Forest University School of Medicine) - Embryonal rhabdomyosarcoma  
Pennsylvania (Allegheny General Hospital) - Epithelioid leiomyosarcoma  
Pennsylvania (Hahnemann University Hospital) - Ewing sarcoma/PNET vs rhabdomyosarcoma  
Texas (Scott & White Memorial Hospital) - Desmoplastic small round cell tumor  
Texas, Lubbock - Epithelioid leiomyosarcoma  
Texas, Sugarland - Intra-abdominal desmoplastic small round cell tumor  
Washington, D.C. - PNET with rhabdoid features  
Canada (University of Calgary, Foothills Hospital) - Epithelioid leiomyosarcoma  
Canada (Woodstock General Hospital) - Epithelioid leiomyoma  
China (Sir Run Run Shaw Hospital) - Endometrial stromal sarcoma, with muscular differentiation  
Italy, Naples - Rhabdomyosarcoma  
Japan (Asahi General Hospital) - Epithelioid angiomyolipoma  
Japan (Hamamatsu University School of Medicine) - Hyalinizing clear cell carcinoma  
Japan (Gunma University Hospital) - Alveolar rhabdomyosarcoma  
Puerto Rico (University of Puerto Rico) - Desmoplastic small round cell tumor (DDx: Angiomyolipoma/Stromal tumor)  
Qatar, Doha - Endometrial stromal sarcoma  
Spain (Povisa) - Leiomyosarcoma with rhabdoid features  
The Netherlands, Amstelveen - Epithelioid leiomyoma

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

**Intra-abdominal desmoplastic small cell tumor, peri-renal  
T-71160, M-80423**

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

- Raja V, Lin JT, Xiao SY: Unusual Abdominal Tumors: Case 2. Intra-Abdominal Desmoplastic Small Round Cell Tumor. *J Clin Oncol*, 2003 Mar 1; 21(5):951-3.
- Argatoff LH, O'Connell JX, Mathers JA, et al: Detection Of The EWS/WT1 Gene Fusion By Reverse Transcriptase-Polymerase Chain Reaction In The Diagnosis Of Intra-Abdominal Desmoplastic Small Round Cell Tumor. *Am J Surg Pathol*, 1996 Apr; 20(4):406-12.
- Takekawa Y, Ugajin W, Koide H, et al: Pathologic, Cytologic And Immunohistochemical Findings Of An Intra-Abdominal Desmoplastic Small Round Cell Tumor In A 15-Year-Old Male. *Pathol Int*, 2000 May; 50(5):417-20. Review.
- De Alvava E, Ladanyi M, Rosai J, Gerald WL: Detection Of Chimeric Transcripts In Desmoplastic Small Round Cell Tumors And Related Developmental Tumors By Reverse Transcriptase Polymerase Chain Reaction: A Specific Diagnostic Assay. *Am J Pathol*, 1995 Dec; 147(6):1584-91.
- Biegel JA, Conard K, Brooks JJ: Translocation (11;22)(p13;q12): Primary Change In Intra-Abdominal Desmoplastic Small Round Cell Tumor. *Genes Chromosomes Cancer*, 1993 Jun; 7(2):119-21.
- Rodriguez E, Sreekantiah C, Gerald W, et al: A Recurring Translocation, t(11;22)(p13;q11.2), Characterizes Intra-Abdominal Desmoplastic Small Round Cell Tumors. *Cancer Genet Cytogenet*, 1993 Aug; 69(1):17-21.

**Case No. 5 Accession No. 29708**

**November, 2004**

Escondido - Cellular fibroadenoma  
Glendale - Low-grade phyllodes with lactational changes  
Granada Hills - Lactating changes in pre-existing fibroadenoma  
Loma Linda (LLUMC Residents) - Phyllodes tumor, as well as lactational changes  
Los Angeles (LAC-USC Residents) - Fibroadenoma with lactational change  
Orange (UCI Medical Center Residents) - Lactating adenoma  
San Francisco (San Francisco General Hospital) - Fibroadenoma with lactational changes  
Arizona, Phoenix - Phyllodes tumor, borderline  
Arkansas (University of Arkansas Medical Center) - Combined fibroadenoma/tubular adenoma with lactational change  
Colorado, Denver - Lactating adenoma  
Florida (Winter Haven Hospital) - Benign Phylloides tumor  
Georgia, Decatur - Phyllodes tumor of breast  
Illinois (Heartland Regional Medical Center) - Phyllodes tumor, benign  
Kansas (Coffeyville Regional Medical Center) - Fibroadenomatous change with lactating adenosis  
Kansas, Manhattan - Mixed fibroadenoma with lactating adenoma  
Louisiana (LSUHSC Pathology Residents Study Group) - Fibroadenoma  
Maryland (Johns Hopkins Medical Center) - Phyllodes tumor  
Maryland (National Naval Medical Center) - Phyllodes tumor  
Maryland (University of Maryland) - Complex fibroadenoma with lactating changes  
Michigan (Pathology Services of West Michigan) - Lactating adenoma  
Michigan (St. Joseph Mercy Hospital) - Fibroadenoma  
Nevada, Las Vegas - Phyllodes tumor  
New York (Nassau University Medical Center) - Lactating adenoma with juvenile fibroadenoma  
New York (State University of New York at Stony Brook) - Benign phyllodes tumor, tubular adenoma  
New York (Westchester Medical Center) - Cellular fibroadenoma  
North Carolina (Wake Forest University School of Medicine) - Benign phyllodes tumor with secretory hyperplasia  
Pennsylvania (Allegheny General Hospital) - Benign phyllodes tumor, fibroadenomatous type, with lactational changes  
Pennsylvania (Hahnemann University Hospital) - Juvenile fibroadenoma vs phyllodes  
Texas (Scott & White Memorial Hospital) - Phyllodes tumor  
Texas, Lubbock - Phyllodes tumor, benign  
Texas, Sugarland - Phyllodes tumor  
Washington, D.C. - Phyllodes tumor, low grade  
Canada (University of Calgary, Foothills Hospital) - Phyllodes tumor  
Canada (Woodstock General Hospital) - Phyllodes tumor with lactational changes  
China (Sir Run Run Shaw Hospital) - Fibroadenoma, with focal adenomatoid hyperplasia  
Italy, Naples - Fibroadenoma with lactational changes ("lactating adenoma")  
Japan (Asahi General Hospital) - Lactating adenoma

[Japan \(Hamamatsu University School of Medicine\)](#) - Fibroadenomatous mastopathy  
[Japan \(Gunma University Hospital\)](#) - Fibroadenoma with pregnant change  
[Puerto Rico \(University of Puerto Rico\)](#) - Phyllodes tumor  
[Qatar, Doha](#) - Fibroadenoma with lactational changes  
[Spain \(Povisa\)](#) - Lobular hyperplasia in pregnancy + fibroadenoma, juvenile, with prominent myoepithelial hyperplasia  
[The Netherlands, Amstelveen](#) - Fibroadenoma with pregnancy changes

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

**Phylloides tumor, low grade, with focal adenosis and lactational changes, breast**  
**T-04010, M-90201**

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

Barth RJ Jr: Histologic Features Predict Local Recurrence After Breast Conserving Therapy In Phyllodes Tumors. *Breast Cancer Res Treat*, 1999 Oct; 57(3):291-5. Review.  
 Tse GM, Ma TK, Chan KF, et al: Increased Microvessel Density In Malignant And Borderline Mammary Phyllodes Tumours. *Histopathology*, 2001 Jun; 38(6):567-70.  
 Zissis C, Apostolikas N, Konstantinidou A, et al: The Extent Of Surgery And Prognosis Of Patients With Phyllodes Tumors Of The Breast. *Breast Cancer Res Treat*, 1998 Apr; 48(3):205-10.  
 Yilmaz E, Sal S, Lebe B: Differentiation Of Phyllodes Tumors Versus Fibroadenomas. *Acta Radiol*, 2002 Jan; 43(1):34-9.  
 Dietrich CU, Pandis N, Bardi G, et al: Karyotypic Changes In Phyllodes Tumors Of The Breast. *Cancer Genet Cytogenet*, 1994 Dec; 78(2):200-6.

#### **Case No. 6 Accession No. 29851**

**November, 2004**

[Escondido](#) - Metaplastic carcinoma  
[Glendale](#) - Metaplastic carcinoma  
[Granada Hills](#) - Ossifying granuloma  
[Loma Linda \(LLUMC Residents\)](#) - Metaplastic carcinoma of the breast with osteocartilagenous elements  
[Los Angeles \(LAC-USC Residents\)](#) - Epithelial mesenchymal metaplastic carcinoma (carcinosarcoma)  
[Orange \(UCI Medical Center Residents\)](#) - Metaplastic carcinoma  
[San Francisco \(San Francisco General Hospital\)](#) - Chondrosarcoma  
[Arizona, Phoenix](#) - Metaplastic carcinoma  
[Arkansas \(University of Arkansas Medical Center\)](#) - Mammary osteosarcoma  
[Colorado, Denver](#) - Chondrosarcoma  
[Florida \(Winter Haven Hospital\)](#) - Osteosarcoma  
[Georgia, Decatur](#) - Metaplastic carcinoma of breast  
[Illinois \(Heartland Regional Medical Center\)](#) - Metaplastic carcinoma  
[Kansas \(Coffeyville Regional Medical Center\)](#) - Osteosarcoma  
[Kansas, Manhattan](#) - Metaplastic carcinoma  
[Louisiana \(LSUHSC Pathology Residents Study Group\)](#) - Metaplastic carcinoma vs post irradiation osteosarcoma  
[Maryland \(Johns Hopkins Medical Center\)](#) - Metaplastic carcinoma  
[Maryland \(National Naval Medical Center\)](#) - Metaplastic carcinoma  
[Maryland \(University of Maryland\)](#) - Metaplastic carcinoma  
[Michigan \(Pathology Services of West Michigan\)](#) - Metaplastic carcinoma  
[Michigan \(St. Joseph Mercy Hospital\)](#) - Carcinosarcoma  
[Nevada, Las Vegas](#) - Metaplastic carcinoma  
[New York \(Nassau University Medical Center\)](#) - Metaplastic carcinoma with chondrosarcomatous component  
[New York \(State University of New York at Stony Brook\)](#) - Metaplastic carcinoma, chondro-osseous type  
[New York \(Westchester Medical Center\)](#) - Metaplastic carcinoma, breast  
[North Carolina \(Wake Forest University School of Medicine\)](#) - Chondrosarcoma, high grade  
[Pennsylvania \(Allegheny General Hospital\)](#) - Metaplastic sarcomatoid carcinoma with osteochondromatous elements  
[Pennsylvania \(Hahnemann University Hospital\)](#) - Carcinosarcoma  
[Texas \(Scott & White Memorial Hospital\)](#) - Metaplastic carcinoma  
[Texas, Lubbock](#) - Metaplastic carcinoma  
[Texas, Sugarland](#) - Carcinosarcoma  
[Washington, D.C.](#) - Metaplastic carcinoma  
[Canada \(University of Calgary, Foothills Hospital\)](#) - Metaplastic carcinoma  
[Canada \(Woodstock General Hospital\)](#) - Sarcomatoid (metaplastic) carcinoma of breast



China (Sir Run Run Shaw Hospital) - Osteosarcoma  
Italy, Naples - Myositis ossificans  
Japan (Asahi General Hospital) - Metaplastic carcinoma, chondro-osseous type  
Japan (Hamamatsu University School of Medicine) - Metaplastic carcinoma  
Japan (Gunma University Hospital) - Carcinoma with metaplasia  
Puerto Rico (University of Puerto Rico) - Osteosarcoma  
Qatar, Doha - Metaplastic carcinoma  
Spain (Povisa) - Chondrosarcoma (rule out metaplastic carcinoma)  
The Netherlands, Amstelveen - Osteosarcoma

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

**Metaplastic carcinoma/carcinosarcoma, breast**

**T-04010, M-89803**

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

Foschini MP, Dina RE, Eusebi V: Sarcomatoid Neoplasms Of The Breast: Proposed Definitions For Biphasic And Monophasic Sarcomatoid Mammary Carcinomas. *Semin Diagn Pathol*, 1993 May; 10(2):128-36.  
 Teixeira MR, Qvist H, Bohler PJ, et al: Cytogenetic Analysis Shows That Carcinosarcomas Of The Breast Are Of Monoclonal Origin. *Genes Chromosomes Cancer*, 1998 Jun; 22(2):145-51.  
 Chhieng C, Cranor M, Lesser ME, Rosen PP: Metaplastic Carcinoma Of The Breast With Osteocartilaginous Heterologous Elements. *Am J Surg Pathol*, 1988 Feb; 22(2):188-94.  
 Han AC, Soler AP, Knudsen KA, Salazar H: Distinct Cadherin Profiles In Special Variant Carcinomas And Other Tumors Of The Breast. *Hum Pathol*, 1999 Sep; 30(9):1035-9.  
 Kurian KM, Al-Nafussi A: Sarcomatoid/Metaplastic Carcinoma Of The Breast: A Clinicopathologic Study of 12 Cases. *Histopathology*, 2002 Jan; 40(1):58-64.

#### **Case No. 7 Accession No. 29676**

**November, 2004**

Escondido - Inflammatory pseudotumor  
Glendale - ? Inflammatory myofibroblastic tumor vs lymphangiomyoma  
Granada Hills - Granuloma, fungal lesion  
Loma Linda (LLUMC Residents) - Myxofibrosarcoma  
Los Angeles (LAC-USC Residents) - Inflammatory pseudotumor  
Orange (UCI Medical Center Residents) - Fibromatosis  
San Francisco (San Francisco General Hospital) - Low grade fibromyxoid sarcoma  
Arizona, Phoenix - Schwannoma, myxoid type  
Arkansas (University of Arkansas Medical Center) - Cellular spindle cell tumor, stomach  
Colorado, Denver - Liposarcoma  
Florida (Winter Haven Hospital) - Fibrosarcoma  
Georgia, Decatur - Gastrointestinal stromal tumor  
Illinois (Heartland Regional Medical Center) - Inflammatory fibroid polyp  
Kansas (Coffeyville Regional Medical Center) - Epithelioid leiomyoma  
Kansas, Manhattan - Fibromatosis  
Louisiana (LSUHSC Pathology Residents Study Group) - Benign fibroblastic proliferation vs schwann cell neoplasm  
Maryland (Johns Hopkins Medical Center) - Fibromatosis  
Maryland (National Naval Medical Center) - Inflammatory pseudotumor  
Maryland (University of Maryland) - Leiomyoma  
Michigan (Pathology Services of West Michigan) - Congenital lesion  
Michigan (St. Joseph Mercy Hospital) - Inflammatory fibroid polyp  
New York (Nassau University Medical Center) - Gastric stromal tumor, non-specific  
New York (State University of New York at Stony Brook) - Inflammatory pseudo-tumor  
New York (Westchester Medical Center) - Inflammatory fibroid polyp  
North Carolina (Wake Forest University School of Medicine) - Gastric fibromatosis  
Pennsylvania (Allegheny General Hospital) - GIST (gastrointestinal stromal tumor)  
Pennsylvania (Hahnemann University Hospital) - C-kit negative GIST versus Desmoid tumor vs Low grade fibrosarcoma  
Texas (Scott & White Memorial Hospital) - Intra-abdominal fibromatosis  
Texas, Lubbock - Epithelioid stromal cell tumor, benign

Texas, Sugarland - Leiomyoma  
Washington, D.C. - Neurofibroma, myxoid  
Canada (University of Calgary, Foothills Hospital) - Inflammatory fibroid polyp  
Canada (Woodstock General Hospital) - Myxoid intra-abdominal (gastric) fibromatosis  
China (Sir Run Run Shaw Hospital) - Myxofibroma  
Italy, Naples - Neurofibroma  
Japan (Asahi General Hospital) - Myxoid leiomyosarcoma  
Japan (Hamamatsu University School of Medicine) - Myxoid leiomyoma  
Japan (Gunma University Hospital) - Neurofibroma  
Puerto Rico (University of Puerto Rico) - Parasitic infection  
Qatar, Doha - Inflammatory fibroid polyp  
Spain (Povisa) - Benign mesenchymal tumor, favor myxofibroma  
The Netherlands, Amstelveen - Myxoid leiomyoma/Leiomyosarcoma

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

**Low grade myxoid tumor, probably sarcoma (NOS), stomach**  
**T-63000, M-88003**

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

Kilpatrick SE, Ward WG, Bos GD: The Value Of Fine-Needle Aspiration Biopsy In The Differential Diagnosis Of Adult Myxoid Sarcoma. *Cancer*, 2000 Jun 25; 90(3):167-77.  
 Shidham VB, Ayala GE, Lahaniatis JE, Garcia FU: Low-Grade Fibromyxoid Sarcoma: A Clinicopathologic Case Report With Review Of the Literature. *Am J Clin Oncol*, 1999 Apr; 22(2):150-5.  
 Graadt van Roggen JF, Hogendoorn PC, Fletcher CD: Myxoid Tumours Of Soft Tissue. *Histopathology*, 1999 Oct; 35(4):291-312.  
 Wakely PE: Myxomatous Soft Tissue Tumors: Correlation Of Cytopathology And Histopathology. *Ann Diagn Pathol*, 1999 Aug; 3(4):227-42.

#### **Case No. 8 Accession No. 29660**

**November, 2004**

Escondido - Clear cell carcinoma  
Glendale - Clear cell carcinoma  
Granada Hills - Serous papillary carcinoma  
Loma Linda (LLUMC Residents) - Papillary serous tumor of the ovary with borderline changes  
Los Angeles (LAC-USC Residents) - Clear cell ovarian carcinoma  
Orange (UCI Medical Center Residents) - Clear cell carcinoma  
San Francisco (San Francisco General Hospital) - Clear cell carcinoma  
Arizona, Phoenix - Serous borderline tumor  
Arkansas (University of Arkansas Medical Center) - Clear cell carcinoma, ovary  
Colorado, Denver - Papillary cystadenocarcinoma  
Florida (Winter Haven Hospital) - Serous cystadenocarcinoma  
Georgia, Decatur - Clear cell carcinoma of ovary  
Illinois (Heartland Regional Medical Center) - Clear cell adenocarcinoma  
Kansas (Coffeyville Regional Medical Center) - Papillary serous cystadenocarcinoma, low grade  
Kansas, Manhattan - Clear cell carcinoma  
Louisiana (LSUHSC Pathology Residents Study Group) - Clear cell carcinoma  
Maryland (Johns Hopkins Medical Center) - Clear cell carcinoma  
Maryland (National Naval Medical Center) - Clear cell carcinoma  
Maryland (University of Maryland) - Clear cell carcinoma  
Michigan (Pathology Services of West Michigan) - Clear cell carcinoma  
Michigan (St. Joseph Mercy Hospital) - Clear cell carcinoma  
Nevada, Las Vegas - Clear cell carcinoma  
New York (Nassau University Medical Center) - Clear cell carcinoma  
New York (State University of New York at Stony Brook) - Clear cell carcinoma  
New York (Westchester Medical Center) - Clear cell carcinoma, ovary  
North Carolina (Wake Forest University School of Medicine) - Clear cell carcinoma  
Pennsylvania (Allegheny General Hospital) - Clear cell papillary cystadenocarcinoma  
Pennsylvania (Hahnemann University Hospital) - Clear cell carcinoma of the ovary/MMMT of the ovary  
Texas (Scott & White Memorial Hospital) - Clear cell carcinoma  
Texas, Lubbock - Clear cell carcinoma

Texas, Sugarland - Clear cell carcinoma  
Washington, D.C. - Clear cell carcinoma  
Canada (University of Calgary, Foothills Hospital) - Clear cell carcinoma  
Canada (Woodstock General Hospital) - Clear cell carcinoma of ovary  
China (Sir Run Run Shaw Hospital) - Clear cell carcinoma  
Italy, Naples - Clear cell carcinoma  
Japan (Asahi General Hospital) - Clear cell carcinoma  
Japan (Hamamatsu University School of Medicine) - Clear cell adenocarcinoma  
Japan (Gunma University Hospital) - Clear cell carcinoma, ovary  
Puerto Rico (University of Puerto Rico) - Clear cell carcinoma  
Qatar, Doha - Clear cell carcinoma of ovary  
Spain (Povisa) - Clear cell adenocarcinoma  
The Netherlands, Amstelveen - Ovary clear cell carcinoma

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

**Clear cell carcinoma, ovary**  
**T-87000, M-8310/3**

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

Jenison EL, Montag AG, Griffiths CT, et al: Clear Cell Adenocarcinoma Of The Ovary: A Clinical Analysis And Comparison With Serous Carcinoma. *Gynecol Oncol*, 1989 Jan; 32(1):65-71. Review.  
 Vang R, Whitaker BP, Farhood AI, et al: Immunohistochemical Analysis Of Clear Cell Carcinoma Of The Gynecologic Tract. *Int J Gynecol Pathol*, 2001 Jul; 20(3):252-9.  
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 Konno R: Gene Expression Profiling Of Human Ovarian Epithelial Tumors By Diagnostic Nucleotide Microarray. *Hum Cell*, 2001 Dec; 14(4):261-6. Review.  
 Shimizu M, Nikaido T, Toki T, et al: Clear Cell Carcinoma Has An Expression Pattern Of Cell Cycle Regulatory Molecules That Is Unique Among Ovarian Adenocarcinomas. *Cancer*, 1999 Feb 1; 85(3):669-77.  
 Ho ES, Lai CR, Hsieh YT, et al: p53 Mutation Is Infrequent In Clear Cell Carcinoma Of The Ovary. *Gynecol Oncol*, 2001 Feb; 80(2):189-93.

#### **Case No. 9 Accession No. 29805**

**November, 2004**

Escondido - MMMT with heterologous elements (carcinosarcoma)  
Glendale - MMMT  
Granada Hills - Invasive endometrial carcinoma  
Loma Linda (LLUMC Residents) - Mixed mesodermal Mullerian tumor (carcinosarcoma) of the uterus  
Los Angeles (LAC-USC Residents) - MMMT with rhabdomyosarcoma component  
Orange (UCI Medical Center Residents) - Carcinosarcoma (MMMT)  
San Francisco (San Francisco General Hospital) - Carcinosarcoma (MMMT)  
Arizona, Phoenix - Malignant mixed Mullerian tumor  
Arkansas (University of Arkansas Medical Center) - Malignant Mullerian mixed tumor, endometrium  
Colorado, Denver - Mixed Mullerian tumor  
Florida (Winter Haven Hospital) - Malignant mixed Mullerian tumor, heterologous type  
Georgia, Decatur - Malignant mixed Mullerian tumor  
Illinois (Heartland Regional Medical Center) - Malignant mixed Mullerian tumor (carcinosarcoma)  
Kansas (Coffeyville Regional Medical Center) - Carcinosarcoma with heterologous components  
Kansas, Manhattan - Carcinosarcoma  
Louisiana (LSUHSC Pathology Residents Study Group) - Malignant mixed mesodermal tumor  
Maryland (Johns Hopkins Medical Center) - MMMT  
Maryland (National Naval Medical Center) - Carcinosarcoma  
Maryland (University of Maryland) - Carcinosarcoma  
Michigan (Pathology Services of West Michigan) - Carcinosarcoma (MMT, heterologous)  
Michigan (St. Joseph Mercy Hospital) - Carcinosarcoma (MMMT)  
Nevada, Las Vegas - MMMT  
New York (Nassau University Medical Center) - Malignant Mullerian tumor

New York (State University of New York at Stony Brook) - Carcinosarcoma  
New York (Westchester Medical Center) - Carcinosarcoma (MMMT)  
North Carolina (Wake Forest University School of Medicine) - Mullerian adenosarcoma  
Pennsylvania (Allegheny General Hospital) - Malignant mixed Mullerian tumor, heterologous or myoid type  
Pennsylvania (Hahnemann University Hospital) - Carcinosarcoma  
Texas (Scott & White Memorial Hospital) - Malignant mixed Mullerian tumor  
Texas, Lubbock - Mixed Mullerian tumor, heterologous  
Texas, Sugarland - Malignant mixed Mullerian tumor  
Washington, D.C. - MMTT  
Canada (University of Calgary, Foothills Hospital) - Carcinosarcoma (MMMT)  
Canada (Woodstock General Hospital) - Malignant mixed mesodermal tumor of endometrium with heterologous (rhabdomyosarcomatous) elements  
China (Sir Run Run Shaw Hospital) - Malignant Mullerian mixed tumor  
Italy, Naples - Malignant mixed Mullerian tumor  
Japan (Asahi General Hospital) - Malignant Mullerian mixed tumor, heterologous type  
Japan (Hamamatsu University School of Medicine) - Carcinosarcoma  
Japan (Gunma University Hospital) - Carcinosarcoma, uterine corpus  
Puerto Rico (University of Puerto Rico) - Malignant mixed Mullerian tumor (carcinosarcoma)  
Qatar, Doha - Malignant mixed Mullerian tumor  
Spain (Povisa) - Malignant mixed Mullerian tumor (carcinosarcoma)  
The Netherlands, Amstelveen - Carcinosarcoma

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

**Malignant mixed Mullerian tumor (“MMMT”, “carcinosarcoma”), uterus**  
**T-82000, M-8980/3**

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

McCluggage WG: Uterine Carcinosarcomas (Malignant Mixed Mullerian Tumors) Are Metaplastic Carcinomas. *Int J Gynecol Cancer*, 2002 Nov-Dec; 12(6):687-90. Review.  
 Seidman JD, Chauhan S: Evaluation Of The Relationship Between Adenosarcoma And Carcinosarcoma: Hypothesis Of The Histogenesis Of Uterine Sarcomas. *Int J Gynecol Pathol*, 2003 Jan; 22(1):75-82.  
 Kloos I, Detalogue S, Pautier P, et al: Tamoxifen-Related Uterine Carcinosarcomas Occur Under/After Prolonged Treatment: Report Of Five Cases And Review Of The Literature. *Int J Gynecol Cancer*, 2002 Sep-Oct; 12(5):496-500. Review.  
 Rovirosa A, Ascaso C, Ordi J, et al: Is Vascular And Lymphatic Space Invasion A Main Prognostic Factor In Uterine Neoplasms With A Sarcomatous Component? A Retrospective Study Of Prognostic Factors Of 60 Patients Stratified By Stages. *Int J Radiat Oncol Biol Phys*, 2002 Apr 1; 52(5):1320-9.  
 Yamada SD, Burger RA, Brewster WR, et al: Pathologic Variables And Adjuvant Therapy As Predictors Of Recurrence And Survival For Patients With Surgically Evaluated Carcinosarcoma Of The Uterus. *Cancer*, 2000 Jun 15; 88(12):2782-6.  
 Costa MJ, Guinee D Jr: CD34 Immunohistochemistry In Female Genital Tract Carcinosarcoma (Malignant Mixed Mullerian Tumors) Supports A Dominant Role Of The Carcinomatous Component. *Appl Immunohistochem Mol Morphol*, 2000 Dec; 8(4):293-9.

**Case No. 10 Accession No. 29682**

**November, 2004**

Escondido - Chondrosarcoma  
Glendale - Low-grade chondrosarcoma  
Granada Hills - Chondrosarcoma  
Loma Linda (LLUMC Residents) - Chondrosarcoma  
Los Angeles (LAC-USC Residents) - Chondrosarcoma  
Orange (UCI Medical Center Residents) - Well-differentiated chondrosarcoma  
San Francisco (San Francisco General Hospital) - Chondrosarcoma, low grade  
Arizona, Phoenix - Chondrosarcoma, Grade I  
Arkansas (University of Arkansas Medical Center) - Chondrosarcoma  
Colorado, Denver - Chondrosarcoma  
Florida (Winter Haven Hospital) - Well-differentiated chondrosarcoma  
Georgia, Decatur - Chondrosarcoma, hyaline type  
Illinois (Heartland Regional Medical Center) - Chondrosarcoma, Grade I  
Kansas (Coffeyville Regional Medical Center) - Low grade chondrosarcoma  
Kansas, Manhattan - Chondrosarcoma

Louisiana (LSUHSC Pathology Residents Study Group) - Low grade chondrosarcoma  
Maryland (Johns Hopkins Medical Center) - Chondrosarcoma  
Maryland (National Naval Medical Center) - Chondrosarcoma  
Maryland (University of Maryland) - Chondrosarcoma, low grade  
Michigan (Pathology Services of West Michigan) - Chondrosarcoma  
Michigan (St. Joseph Mercy Hospital) - Chondrosarcoma  
Nevada, Las Vegas - Chondrosarcoma  
New York (Nassau University Medical Center) - Well-differentiated chondrosarcoma  
New York (State University of New York at Stony Brook) - Chondrosarcoma, low grade  
New York (Westchester Medical Center) - Chondrosarcoma  
North Carolina (Wake Forest University School of Medicine) - Chondrosarcoma  
Pennsylvania (Allegheny General Hospital) - Chondrosarcoma  
Pennsylvania (Hahnemann University Hospital) - Low grade chondrosarcoma vs chondroid chordoma  
Texas (Scott & White Memorial Hospital) - Chondrosarcoma  
Texas, Lubbock - Chondrosarcoma  
Texas, Sugarland - Chondrosarcoma  
Washington, D.C. - Chondrosarcoma, well-differentiated  
Canada (University of Calgary, Foothills Hospital) - Chondrosarcoma  
Canada (Woodstock General Hospital) - Chondroma  
China (Sir Run Run Shaw Hospital) - Chondrosarcoma  
Italy, Naples - Low grade chondrosarcoma  
Japan (Asahi General Hospital) - Chondrosarcoma  
Japan (Hamamatsu University School of Medicine) - Chondrosarcoma  
Japan (Gunma University Hospital) - Chondrosarcoma, grade I  
Puerto Rico (University of Puerto Rico) - Chondrosarcoma, grade II  
Qatar, Doha - Well-differentiated chondrosarcoma  
Spain (Povisa) - Low-grade (well-differentiated) chondrosarcoma  
The Netherlands, Amstelveen - Chondrosarcoma

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

**Chondrosarcoma, Grade I (of III), pelvis**  
**T-Y6000, M-9220/3**

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

- Bergh P, Gunterberg B, Meis-Kindblom JM, Kindblom LG: Prognostic Factors And Outcome Of Pelvic, Sacral, And Spinal Chondrosarcomas: A Center-Based Study Of 69 Cases. *Cancer*, 2001 Apr 1; 91(7):1201-12.  
 Sheth DS, Yasko AW, Johnson ME, et al: Chondrosarcoma Of The Pelvis: Prognostic Factors For 67 Patients Treated With Definitive Surgery. *Cancer*, 1996 Aug 15; 78(4):745-50.  
 Weber KL, Pring ME, Sim FH: Treatment And Outcome Of Recurrent Pelvic Chondrosarcoma. *Clin Orthop*, 2002 Apr; (397):19-28.  
 Yokoyama R, Beppu Y, Tobisu Ki K, et al: A Multidisciplinary Approach To The Treatment Of Malignant Pelvic Bone Tumors: Results With Eight Consecutive Patients. *J Orthop Sci*, 2000; 5(5):449-56.  
 Ball AB, Barr L, Westbury G: Chondrosarcoma Of The Pelvis: The Role Of Palliative Debulking Surgery. *Eur J Surg Oncol*, 1991 Apr; 17(2):135-8.  
 Masterson EL, Davis AM, Wunder JS, Bell RS: Hindquarter Amputation For Pelvic Tumors. The Importance of Patient Selection. *Clin Orthop*, 1998 May; (350):187-94.