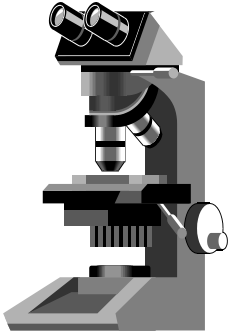


CALIFORNIA  
TUMOR TISSUE REGISTRY



*BREAST PATHOLOGY*

Minutes – Subscription A

January 1999

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

- Limitations of Specific Reverse-Transcriptase Polymerase Chain Reaction Markers in the Detection of Metastases in the Lymph Nodes and Blood of Breast Cancer Patients. *J of Clin Oncol* 1998; 16(8):2632-2640. Bostick PJ, Chatterjee S, Chi DD, Huynh KT, Giuliano AE, et al.
- Endovaginal Ultrasound to Exclude Endometrial Cancer and Other Endometrial Abnormalities. *JAMA* 1998; 280(17):1510-1511. Smith-Bindman R, Kerlikowske K, Feldstein VA, Subak L, Scheidler J, Segal M, et al.
- Local Recurrence of Breast Cancer After Cytological Evaluation of Lumpectomy Margins. Cox CE, Pendas S, Ku NNK, Reintgen, DS, Greenberg HS, et al. *Am Surgeon* 1998; 64(6):533-539.

California Tumor Tissue Registry  
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Loma Linda University School of Medicine  
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Loma Linda, California 92350  
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INLAND (Riverside/San Bernardino) - Squamous cell carcinoma (1); Undifferentiated carcinoma (1); Carcinoma high grade with necrosis (1); Carcinoma, ductal type with comedo necrosis (1); High grade poorly differentiated duct carcinoma (1)

BAKERSFIELD (Central Valley Study Group) - Atypical medullary carcinoma

ORANGE - Atypical medullary carcinoma.

MONTEREY - Infiltrating ductal carcinoma, grade 3/3

BAY AREA - Infiltrating ductal carcinoma with medullary features (3)

SANTA ROSA - Duct carcinoma, probably invasive (1); Poorly differentiated ductal carcinoma (1); Atypical medullary carcinoma versus poorly differentiated carcinoma (1)

LONG BEACH - Poorly differentiated ductal carcinoma (6)

SAN DIEGO (Naval Medical Center) - Atypical medullary carcinoma (14)

SACRAMENTO (UC Davis) - High grade ductal carcinoma, comedo necrosis type

HAYWARD (St. Rose Hospital) - Poorly differentiated carcinoma consistent with grade III ductal carcinoma (6)

NEVADA (Reno) - High grade invasive ductal carcinoma (2)

TEXAS (Texas Tech Regional Acad Hlth Ctr) - Infiltrating ductal carcinoma

NEBRASKA (Creighton Univ.) - Invasive ductal carcinoma, high grade

ILLINOIS (Hinsdale Hospital) - Infiltrating carcinoma with features of medullary carcinoma (1); Medullary carcinoma vs (comedo-ductal)

MICHIGAN (Oakwood Hospital) - Medullary carcinoma

MICHIGAN (Ann Arbor) - Atypical medullary carcinoma (2); Medullary carcinoma (1); Poorly differentiated ductal carcinoma (1)

FLORIDA (Tallahassee) - Infiltrating ductal carcinoma, grade 3/3 (4)

FLORIDA (Orlando) - Invasive high grade ductal carcinoma with extensive comedo-type necrosis

OHIO (McCullough-Hyde Memorial Hospital) - High grade ductal carcinoma with comedo necrosis (comedo carcinoma)

KENTUCKY (Baptist Hospital East) - Invasive duct carcinoma, grade III (2)

LOUISIANA (Louisiana State Univ Med Ctr) - Infiltrating ductal carcinoma, high grade, with medullary features

NORTH CAROLINA (WNC Pathology Group) - Atypical medullary carcinoma (4)

MARYLAND (Woodbine) - Lobular carcinoma (1); Apocrine carcinoma (1)

MARYLAND (National Naval Medical Center) - Infiltrating ductal carcinoma, high grade (9); Atypical medullary carcinoma (5)

WASHINGTON, D.C. (Walter Reed) - Infiltrating ductal carcinoma, grade III with DCIS

PENNSYLVANIA (Conemaugh Memorial Hospital) - Infiltrating ductal carcinoma with extensive comedo necrosis.

PENNSYLVANIA (BB Group) - Comedo carcinoma in-situ

PENNSYLVANIA (Lehigh Valley Hospital) - Infiltrating ductal carcinoma, grade 3 (1); Medullary carcinoma (1)

NEW YORK (Northport) - Poorly differentiated duct carcinoma

NEW JERSEY (Summit) - Circumscribed, poorly differentiated invasive ductal carcinoma (3)

MASSACHUSETTS (Berkshire Medical Ctr) - Medullary carcinoma

CONNECTICUT (Univ Conn Hlth Ctr) - High grade adenosquamous carcinoma, favor breast primary (metastatic, such as lung primary, cannot be ruled out)

AUSTRALIA (Sydney) - Grade 3 invasive duct carcinoma (3); Atypical medullary carcinoma (3)

**DIAGNOSIS:****HIGH GRADE DUCTAL CARCINOMA WITH MEDULLARY FEATURES (“ATYPICAL MEDULLARY CARCINOMA”)**

T04010, M85103

**REFERENCES:**

- Bellamy CO, Paul AB, Fleming S, et al. Noninvasive Ductal Carcinoma of the Breast. The Relevance of Histologic Categorization. *Hum Pathol* 1993; 24(1):16-23.
- Hillner BE, Desch CE, Carlson RW, Smith TJ, et al. Trade-Offs Between Survival and Breast Preservation for Three Initial Treatments of Ductal Carcinoma In-Situ of the Breast. *J Clin Oncol* 1996; 14(1):70-77.
- Badave S, Hern RP, Ward AM, Mills RR, et al. Prediction of Local Recurrence of Ductal Carcinoma In-Situ of the Breast Using Five Histological Classifications. A Comparative Study with Long Follow-Up. *Hum Pathol* 1998; 29(9):915-923.
- Rajan PB, Cranor ML, Rosen and Rosen PP. Cystosarcoma Phyllodes in Adolescent Girls and Young Women. A Study of 45 Patients. *Am J Surg Pathol* 1998; 22(1): 64-69.
- O’Hea BJ, Hill AD, El-Shirbury A, Yeh SD, Rosen PP, et al. Sentinel Lymph Node Biopsy in Breast Cancer . Initial Experience at Memorial Sloan-Kettering Cancer Center. *J Am Coll Surg* 1998; 186(4):423-427.

INLAND (Riverside/San Bernardino) - Fibroadenoma with intraductal carcinoma in-situ (1); Benign cystosarcoma phyllodes (1); Phyllodes tumor, benign (2); Pseudosarcomatous stromal hyperplasia (1)

BAKERSFIELD (Central Valley Study Group) - Phyllodes tumor

ORANGE - Active pseudoangiomatous hyperplasia

MONTEREY - Infiltrating ductal carcinoma, grade 3/3

BAY AREA - Myofibroblastoma (1); Benign phyllodes tumor (1); Benign fibrous tumor (1)

SANTA ROSA - Duct carcinoma, invasive (1); Carcinosarcoma (2)

LONG BEACH - Poorly differentiated ductal carcinoma (6) – (In a second set we have case #2 showing only benign breast tissue suggestive of benign phyllodes tumor without evid of malig.

SAN DIEGO (Naval Medical Center) - Benign Phyllodes tumor (1); Borderline phyllodes tumor (8); Juvenile fibroadenoma (2)

SACRAMENTO (UC Davis) - Phyllodes tumor, low grade

HAYWARD (St. Rose Hospital) - Fibroadenoma (cellular and fibrosing) (6)

NEVADA (Reno) - Phyllodes tumor (2)

TEXAS (Texas Tech Regional Acad Hlth Ctr) - Benign phyllodes tumor

NEBRASKA (Creighton Univ) - Fibroadenoma with features of juvenile giant fibroadenoma

ILLINOIS (Hinsdale Hospital) - Phyllodes tumor (2)

MICHIGAN (Oakwood Hospital) - Benign phyllodes tumor

MICHIGAN (Ann Arbor) - Phyllodes tumor (2); Phyllodes tumor , benign (2)

FLORIDA (Tallahassee) - Benign phyllodes tumor (4)

FLORIDA (Orlando) - Fibromatosis of breast

OHIO (McCullough-Hyde Memorial Hospital) - Cystosarcoma phyllodes, benign

KENTUCKY (Baptist Hospital East) - Phyllodes tumor, histologically benign (2)

LOUISIANA (Louisiana State Univ Med Ctr) - Phyllodes tumor, low grade

NORTH CAROLINA (WNC Pathology Group) - Giant fibroadenoma (juvenile fibroadenoma) (2); Giant (juvenile) fibroadenoma (2)

MARYLAND (Woodbine) - Cystosarcoma phyllodes, benign (1); Juvenile fibroadenoma (1)

MARYLAND (National Naval Medical Center) - Pseudoangiomatous hyperplasia (4); Fibroadenoma with Kaposi's sarcoma (4); Kaposi's sarcoma (2)

WASHINGTON, D.C. (Walter Reed) - Juvenile fibroadenoma

PENNSYLVANIA (Conemaugh Memorial Hospital) - Pseudoangiomatous stromal hyperplasia

PENNSYLVANIA (BB Group) - Phylloides tumor ; Cellular Phyllodes tumor

PENNSYLVANIA (Lehigh Valley Hospital) - Infiltrating ductal carcinoma (1); Poorly differentiated carcinoma with metaplasia (1)

NEW YORK (Northport) - PASH

NEW JERSEY (Summit) - Hamartoma (2); Fibroadenoma with pseudo lymphangiomatous stroma (1)

MASSACHUSETTS (Berkshire Medical Ctr) - Phyllodes tumor (6) vs cellular fibroadenoma (2)

CONNECTICUT (Univ Conn Hlth Ctr) - Cystosarcoma phyllodes w/angiosarcoma component

AUSTRALIA (Sydney) - Giant fibroadenoma

**DIAGNOSIS:****PHYLLODES TUMOR, BREAST**

T04010, M90203

**REFERENCES:**

- Hiraoka N, Mukai M, Hosoda Y and Hata J. Phyllodes Tumor of the Breast Containing the Intracytoplasmic Inclusion Bodies Identical with Infantile Digital Fibromatosis. *Am J Surg Pathol* 1994; 18(5):506-511.
- Pietruszka M and Barnes L. Cystosarcoma Phyllodes. A Clinicaopathologic Analysis of 42 Cases. *Cancer* 1978; 1974-1983.
- Rao BR, Meyer JS, and Fry G. Most Cystosarcoma Phyllodes and Fibroadenomas Have Progesterone Receptors but Lack Estrogen Receptor. Stromal Localization of Progesterone Receptors. *Cancer* 1981; 47:2016-2921.
- Salvadori B, Cosumano F, Del Bo R, et al. Surgical Treatment of Phyllodes Tumors of the Breast. *Cancer* 1989; 63:2532-2536.
- Ward RM and Evans HL. Cystosarcoma Phyllodes. A Clinicopathologic Study of 26 Cases. *Cancer* 1986; 58:2282-2289.

INLAND (Riverside/San Bernardino) - Immunoblastic sarcoma (1); High-grade lymphoma (2); B-cell lymphoma (1); Plasmablastoma (1)

BAKERSFIELD (Central Valley Study Group) - Plasmacytoma

ORANGE - Lymphoma, large cell

MONTEREY - Burkitt's lymphoma

BAY AREA - Plasma cell mastitis and granulomatous reaction (3)

SANTA ROSA - Lymphoplasmacytic neoplasm, Burkitt's-like (1); Lymphoplasmacytoma versus reactive process (1); Pseudolymphoma (1)

LONG BEACH - High-grade lymphoma (6)

SAN DIEGO (Naval Medical Center) - Burkitt's lymphoma (14)

SACRAMENTO (UC Davis) - Diffuse, large cell B-cell lymphoma

HAYWARD (St. Rose Hospital) - Lymphoma, small non-cleaved non-Burkitt's (6)

NEVADA (Reno) - High grade small non-cleaved cell lymphoma (2)

TEXAS (Texas Tech Regional Acad Hlth Ctr) - Malignant lymphoma, Burkitt's type

NEBRASKA (Creighton Univ) - Malignant lymphoma, immunoblastic type

ILLINOIS (Hinsdale Hospital) - Lymphoma (1); Malignant lymphoma, large cell immunoblastic

MICHIGAN (Oakwood Hospital) - Burkitt's lymphoma

MICHIGAN (Ann Arbor) - Small cell non-cleaved lymphoma, Burkitt's type (4)

FLORIDA (Tallahassee) - Lymphoma (4)

FLORIDA (Orlando) - Large cell lymphoma of breast

OHIO (McCullough-Hyde Memorial Hospital) - Burkitt's lymphoma

KENTUCKY (Baptist Hospital East) - Malignant lymphoma, B-cell, high grade (Burkitt's)

LOUISIANA (Louisiana State Univ Med Ctr) - Malignant lymphoma, small non-cleaved Burkitt's type

NORTH CAROLINA (WNC Pathology Group) - High grade lymphoma, likely Burkitt's (4)

MARYLAND (Woodbine) - Plasmacytoma (2)

MARYLAND (National Naval Medical Center) - Malignant lymphoma, B-cell type, extra nodal

WASHINGTON, D.C. (Walter Reed) - Burkitt's lymphoma

PENNSYLVANIA (Conemaugh Memorial Hospital) - High grade lymphoma

PENNSYLVANIA (BB Group) - Lymphoma; Burkitt's

PENNSYLVANIA (Lehigh Valley Hospital) - Lymphoma, favor immunoblastic type (marked crush artifact hinders evaluation) (2)

NEW YORK (Northport) - Pseudolymphoma

NEW JERSEY (Summit) - Malignant lymphoma, large cell type (3)

MASSACHUSETTS (Berkshire Medical Ctr) - Lymphoma

CONNECTICUT (Univ Conn Hlth Ctr) - Immunoblastic lymphoma

AUSTRALIA (Sydney) - Non Hodgkin's lymphoma? Burkitt's? Immunoblastic ? Mantle

**DIAGNOSIS:**

**SMALL NON-CLEAVED FOLLICULAR CENTER CELL LYMPHOMA, DIFFUSE  
(BURKITT'S LYMPHOMA)**

T04010, M97503

CONSULTATION: USC Clinical Laboratories. "Small Non-Cleaved Follicular Center Cell Lymphoma, Diffuse (Burkitt's Lymphoma).

REFERENCES:

- Hoffman DG, Tucker SJ, Ammanoulides C, Rosen PA and Noem F. CD8 Positive Mantle Cell Lymphoma. Report of Two Cases. *Am J Clin Pathol* 1998; 109(6):689-694.
- Hoh CK, Glaspy J, Rosen P, et al. Whole Body FDG-PET Imaging for Staging of Hodgkin's Disease and Lymphoma. *J Nucl Med* 1997; 38(3):343-348.
- Brustein S, Filippa DA, Kimmel M, Lieberman PH and Rosen PP. Malignant Lymphoma of the Breast. A Study of 53 Patients. *Ann Surg* 1987; 205(2):144-150.
- Cohen PL, Brooks JJ. Lymphomas of the Breast. A Clinicopathologic and Immunohistochemical Study of Primary and Secondary Cases. *Cancer* 1991; 67(5):1359-1369.
- Armitage JO and Weisenburger. New Approach to Classifying Non-Hodgkin's Lymphomas. Clinical Features of the Major Histologic Subtypes. *Journal of Clinical Oncol* 1998; 16(8):2780-2795.
- Dao AH, Adkins RB and Glick AD. Malignant Lymphoma of the Breast. A Review of 13 Cases. *Amer Surg* 1992; 58(12):792-796.

INLAND (Riverside/San Bernardino) - Ductal carcinoma in-situ, clinging type (1); Cystic hypersecretory lesion (? DCIS) and fibroadenomatoid hyperplasia (1); Fibroadenoma (1); Benign fibroadenoma (cyst with epithelial changes papillomatosis). Some areas like gynecomastia (1); Micropapillary duct hyperplasia (1)

BAKERSFIELD (Central Valley Study Group) - Intraductal carcinoma

ORANGE - Inter and intra-lobular fibrosis with cysts

MONTEREY - Infiltrating ductal carcinoma arising in fibroadenoma

BAY AREA - Fibroadenoma with fibrocystic changes (3)

SANTA ROSA - Fibroadenoma-like reaction with sclerosing adenosis and epithelial hyperplasia (1); Papillomatosis-swiss cheese disease (2)

LONG BEACH - Ductal carcinoma in-situ (in fibroadenoma?) (6)

SAN DIEGO (Naval Medical Center) - Low grade DCIS (2); Low grade DCIS arising in a fibroadenoma (3); Fibroadenoma with atypical ductal hyperplasia with micropapillary and cribriform patterns (5)

SACRAMENTO (UC Davis) - Atypical ductal hyperplasia

HAYWARD (St. Rose Hospital) - Swiss cheese disease (fibrocystic without atypia) (6)

NEVADA (Reno) - Phylloides tumor with atypical hyperplasia (2)

TEXAS (Texas Tech Regional Acad Hlth Ctr) - Benign Phyllodes tumor

NEBRASKA (Creighton Univ) - Hamartoma

ILLINOIS (Hinsdale Hospital) - Microglandular adenosis (1); Tubular adenoma (1)

MICHIGAN (Oakwood Hospital) - Florid hyperplasia and duct dilation, consistent with juvenile papillomatosis

MICHIGAN (Ann Arbor) - Juvenile papillomatosis (4)

FLORIDA (Tallahassee) - Micropapillary and mucinous DCIS with fibroadenoma (2); Fibroadenoma with prominent epithelial hyperplasia (1)

FLORIDA (Orlando) - Fibrocystic disease of breast with intraductal hyperplasia and myomatous hyperplasia

OHIO (McCullough-Hyde Memorial Hospital) - Benign sclerosing lesion (? Fibroadenoma with sclerosing adenosis)

KENTUCKY (Baptist Hospital East) - Cystic hypersecretory hyperplasia (2)

LOUISIANA (Louisiana State Univ Med Ctr) - Fibrocystic disease

NORTH CAROLINA (WNC Pathology Group) - Juvenile papillomatosis (4)

MARYLAND (Woodbine) - Juvenile papillomatosis (2)

MARYLAND (National Naval Medical Center) - Juvenile papillomatosis (9); Cystic hypersecretory hyperplasia (3)

WASHINGTON, D.C. (Walter Reed) - Gastric hypersecretory carcinoma

PENNSYLVANIA (Conemaugh Memorial Hospital) - Clinging carcinoma, fibrocystic disease, sclerosing fibroadenoma

PENNSYLVANIA (BB Group) - Clinging ductal carcinoma

PENNSYLVANIA (Lehigh Valley Hospital) - Adenoma vs. adenosis (1); Ductal adenoma (1)

NEW YORK (Northport) - Myoid hamartoma

NEW JERSEY (Summit) - Fibroadenomatoid nodule with cystic change (3)

MASSACHUSETTS (Berkshire Medical Ctr) - Fibroadenoma with fibrocystic changes and benign duct hyperplasia

CONNECTICUT (Univ Conn Hlth Ctr) - Micropapillary intracystic carcinoma associated with fibroadenoma

AUSTRALIA (Sydney) - Breast hamartoma with fibrocystic changes

**DIAGNOSIS:**

**MYOID HAMARTOMA WITH DUCTAL HYPERPLASIA, BREAST (“MUSCULAR HAMARTOMA”)**

T04010, M75500

**REFERENCES:**

Shepstone BJ, Wells CA, Berry AR and Ferguson JDP. Mamographic Appearance of Histopathological Description of Muscular Hamartoma of the Breast. *Br J Radiol* 1985; 58(689):459-461.

Davies JD and Riddell RH. Muscular Hamartomas of the Breast. *J Pathol* 1973; 111(3):209-211.

Eusebi V, Cunsold A, Fedeli F, Severi B, et al. Benign Smooth Muscle Cell Metaplasia of the Breast. *Tumori* 1980; 66(5): 643-653.

Oberman HA. Hamartomas and Hamartoma Variants of the Breast. *Semin Diag Pathol* 1989; 6 (2):135-145.

INLAND (Riverside/San Bernardino) - Stromal sarcoma (1); Malignant cystosarcoma phyllodes (1); Sarcoma, NOS (1); Spindle cell neoplasm, high grade (r/o malignant phyllodes tumor, r/o sarcoma, neural vs small muscle vs vascular) (1); High grade malignant fibrous histiocytoma (1)

BAKERSFIELD (Central Valley Study Group) - Fibrosarcoma

ORANGE - Sarcoma, high grade, NOS

MONTEREY - Phyllodes tumor

BAY AREA - Malignant phyllodes tumor (sarcomatous stroma) (3)

SANTA ROSA - Phyllodes tumor, malignant or stromal sarcoma, depending on what other areas look like (1); Stromal sarcoma, low grade (1); Sarcoma

LONG BEACH - Malignant phyllodes tumor (6)

SAN DIEGO (Naval Medical Center) - Malignant cystosarcoma phyllodes (14)

SACRAMENTO (UC Davis) - DFSP vs cellular schwannoma

HAYWARD (St. Rose Hospital) - Metaplastic carcinoma (needs Ipx) (6)

NEVADA (Reno) - Malignant phyllodes (2)

TEXAS (Texas Tech Regional Acad Hlth Ctr) - Malignant cystosarcoma phyllodes

NEBRASKA (Creighton Univ) - Malignant spindle cell neoplasm, favor fibrosarcoma, low grade

ILLINOIS (Hinsdale Hospital) - Sarcoma, suggestive of fibrosarcoma

MICHIGAN (Oakwood Hospital) - Malignant neoplasm resembling MPNST, metaplastic carcinoma cannot be ruled out

MICHIGAN (Ann Arbor) - Phyllodes tumor, malignant (3); Stromal sarcoma, low grade (1)

FLORIDA (Tallahassee) - Cystosarcoma phyllodes, malignant (4)

FLORIDA (Orlando) - Low grade fibrosarcoma of breast

OHIO (McCullough-Hyde Memorial Hospital) - Cystosarcoma phyllodes, malignant

KENTUCKY (Baptist Hospital East) - Sarcoma (1); Malignant phyllodes tumor (1)

LOUISIANA (Louisiana State Univ Med Ctr) - Phyllodes tumor, malignant

NORTH CAROLINA (WNC Pathology Group) - Malignant phyllodes tumor (3); Cystosarcoma malignant with stroma overgrowth (1)

MARYLAND (Woodbine) - Leiomyosarcoma (1); Spindle cell sarcoma (1)

MARYLAND (National Naval Medical Center) - High grade phyllodes tumor (14)

WASHINGTON, D.C. (Walter Reed) - Stromal sarcoma, favor DFSP (dermatofibrosarcoma protuberans)

PENNSYLVANIA (Conemaugh Memorial Hospital) - Malignant phyllodes tumor, MFH phenotype

PENNSYLVANIA (BB Group) - Radial scar, fibrosarcoma

PENNSYLVANIA (Lehigh Valley Hospital) - Malignant phyllodes tumor (1); MFH (1)

NEW YORK (Northport) - Sarcoma with neurogenic features

NEW JERSEY (Summit) - Sarcoma, possibly neurogenic, possibly arising in a phyllodes tumor (3)

MASSACHUSETTS (Berkshire Medical Ctr) - Malignant peripheral nerve sheath tumor probably arising in a phyllodes tumor

CONNECTICUT (Univ Conn Hlth Ctr) - Cystosarcoma phyllodes with malignant fibrous histiocytoma and ? schwannoma differentiation

AUSTRALIA (Sydney) - Malignant phyllodes tumor

**DIAGNOSIS:****MALIGNANT PHYLLODES TUMOR, BREAST**

T04010, M90203

**REFERENCES:**

- Palko MJ, Wang SE, Shackney SE, Cottingham EM, et al. Flow Cytometric S Fraction as a Predictor of Clinical Outcome in Cystosarcoma Phyllodes. *Arch Pathol Lab Med* 1990; 114(9): 949-952.
- Bernstein L, Deapen D and Ross RK. The Descriptive Epidemiology of Malignant Cystosarcoma Phyllodes Tumors of the Breast. *Cancer* 1993; 71(10): 3020-3024.
- Cohn-Cedermark G, Rutquist LE, Rosendahl I and Silfversward C. Prognostic Factors in Cystosarcoma Phyllodes A Clinicopathologic Study of 77 Patients. *Cancer* 1991; 68(9):2017-2022.
- Moffat CJC, Pinder SE, Dixon AR, Elston CW, et al. Phyllodes Tumours of the Breast. A Clinicopathological Review of Thirty-Two Cases. *Histopathol* 1995; 27(3): 205-218.

INLAND (Riverside/San Bernardino) - Medullary carcinoma (1); Metaplastic carcinoma (3); High grade metaplastic squamous carcinoma (1)

BAKERSFIELD (Central Valley Study Group) - Metaplastic squamous carcinoma

ORANGE - Pleomorphic, poorly differentiated carcinoma with squamoid features

MONTEREY - Infiltrating ductal carcinoma

BAY AREA - Osteoclast-like giant cell carcinoma (3)

SANTA ROSA - Poorly-differentiated malignant neoplasm, rule out (2); Anaplastic carcinoma, rule out metastasis (1)

LONG BEACH - Poorly-differentiated carcinoma (6)

SAN DIEGO (Naval Medical Center) - Metaplastic carcinoma (14)

SACRAMENTO (UC Davis) - Poorly differentiated carcinoma

HAYWARD (St. Rose Hospital) - Anaplastic carcinoma

NEVADA (Reno) - Poorly differentiated carcinoma with sarcomatoid features (2)

TEXAS (Texas Tech Regional Acad Hlth Ctr) - Metaplastic squamous carcinoma

NEBRASKA (Creighton Univ) - Metaplastic carcinoma, breast

ILLINOIS (Hinsdale Hospital) - Anaplastic carcinoma (2)

MICHIGAN (Oakwood Hospital) - Poorly differentiated carcinoma

MICHIGAN (Ann Arbor) - High grade squamous carcinoma (2); Clear cell sarcoma (1) Metaplastic carcinoma (1)

FLORIDA (Tallahassee) - Anaplastic carcinoma (4)

FLORIDA (Orlando) - High grade ductal carcinoma, breast, with giant tumor cells

OHIO (McCullough-Hyde Memorial Hospital) - Poorly differentiated carcinoma with squamous differentiation

KENTUCKY (Baptist Hospital East) - Apocrine carcinoma (2)

LOUISIANA (Louisiana State Univ Med Ctr) - Pleomorphic giant cell carcinoma

NORTH CAROLINA (WNC Pathology Group) - Metaplastic carcinoma (3); Carcinosarcoma (1)

KENTUCKY (Woodbine) - Metaplastic carcinoma (2)

MARYLAND (National Naval Medical Center) - Anaplastic carcinoma (10); Carcinoma with hepatoid features (3)

WASHINGTON, D.C. (Walter Reed) - Metaplastic breast carcinoma

PENNSYLVANIA (Conemaugh Memorial Hospital) - Metaplastic squamous cell carcinoma

PENNSYLVANIA (BB Group) - Metaplastic ductal carcinoma

PENNSYLVANIA (Lehigh Valley Hospital) - Carcinoma with osteoclastic giant cells (1); Metaplastic carcinoma (1)

NEW YORK (Northport) - Metaplastic carcinoma

NEW JERSEY (Summit) - Large cell undifferentiated ductal carcinoma with tumor giant cells (3)

MASSACHUSETTS (Berkshire Medical Center) - Histiocytoid carcinoma (2) vs. metaplastic carcinoma (6)

CONNECTICUT (Univ Conn Hlth Ctr) - Metaplastic giant cell carcinoma

AUSTRALIA (Sydney) - Pleomorphic carcinoma ? squamous

**DIAGNOSIS:**

**ANAPLASTIC CARCINOMA WITH FOCAL SARCOMATOID METAPLASIA, BREAST**  
T04010, M81403

**REFERENCES:**

- Foschini MP, Dina RE and Eusebi V. Sarcomatoid Neoplasms of Breast. Proposed Definitions for Biphasic and Monophasic Sarcomatoid Mammary Carcinomas. *Semin Diag Pathol* 1993; 10:128-136.
- Herrington CS, Tarin D, Buely I and Athanason H. Osteosarcomatous Differentiation in Carcinoma of the breast. A Case of Metaplastic Carcinoma with Osteoclasts and Osteoclast-Like Giant Cells. *Histopathol* 1994; 24:282-285.
- van Agthoven T, Timmermans M, Foekens JA and Dorssers LC. Differential Expression of Estrogen, Progesterone, and Epidermal Growth Factor Receptors in Normal, Benign and Malignant Human Breast Tissues Using Dual Staining Immunohistochemistry. *Am J Pathol* 1994; 144(6):1238-1246.
- Braun AC. The epigenic Model for the Origin of Cancer. *Q Rev Biol* 1981; 56(1):33-60.

INLAND (Riverside/San Bernardino) - Hodgkin's disease (1); Medullary carcinoma (3); High grade poorly differentiated squamous cell carcinoma (1)

BAKERSFIELD (Central Valley Study Group) - Medullary carcinoma

ORANGE - Medullary carcinoma

MONTEREY - Medullary carcinoma

BAY AREA - Medullary carcinoma (3)

SANTA ROSA - Duct carcinoma, invasive, with prominent plasmacytosis (1); Medullary carcinoma (2)

LONG BEACH - Medullary carcinoma (6)

SAN DIEGO (Naval Medical Center) - Medullary carcinoma (6); Atypical medullary carcinoma (6)

SACRAMENTO (UC Davis) - Medullary carcinoma of breast

HAYWARD (St. Rose Hospital) - Medullary carcinoma (some fibrous areas are perfect for solitary fibrous tumor)

NEVADA (Reno) - Poorly differentiated invasive carcinoma with medullary features (2)

TEXAS (Texas Tech Regional Acad Hlth Ctr) - Infiltrating ductal carcinoma

NEBRASKA (Creighton Univ) - Medullary carcinoma

ILLINOIS (Hinsdale Hospital) - Medullary carcinoma (2)

MICHIGAN (Oakwood Hospital) - Atypical medullary carcinoma

MICHIGAN (Ann Arbor) - Medullary carcinoma (2); Atypical medullary carcinoma (1); Ductal carcinoma (1)

FLORIDA (Tallahassee) - Medullary carcinoma (4)

FLORIDA (Orlando) - High grade ductal carcinoma of breast with reactive plasma cell component

OHIO (McCullough-Hyde Memorial Hospital) - Medullary carcinoma

KENTUCKY (Baptist Hospital East) - Medullary carcinoma (2)

LOUISIANA (Louisiana State Univ Med Ctr) - Medullary carcinoma, atypical

NORTH CAROLINA (WNC Pathology Group) - Medullary carcinoma (4)

MARYLAND (Woodbine) - Medullary carcinoma (2)

MARYLAND (National Naval Medical Center) - Medullary carcinoma (4); Infiltrating ductal carcinoma (4); Metaplastic carcinoma (3)

WASHINGTON, D.C. (Walter Reed) - Carcinoma with features of medullary carcinoma

PENNSYLVANIA (Conemaugh Memorial Hospital) - Medullary carcinoma

PENNSYLVANIA (BB Group) - Medullary carcinoma

PENNSYLVANIA (Lehigh Valley Hospital) - Favor medullary carcinoma but need to see entire border of tumor

NEW YORK (Northport) - Atypical medullary carcinoma

NEW JERSEY (Summit) - Medullary carcinoma (3)

MASSACHUSETTS (Berkshire Medical Ctr) - Atypical medullary carcinoma (2) vs high grade ductal carcinoma (6)

CONNECTICUT (Univ Conn Hlth Ctr) - Medullary carcinoma

AUSTRALIA (Sydney) - Medullary carcinoma (plasma cells predominate in stroma)

**DIAGNOSIS:**

**MEDULLARY CARCINOMA, BREAST**

T04010, M85103

**REFERENCES:**

- Domagala W, Wozniak L, Lasota J and Weber K, et al. Vimentin is Preferentially Expressed in High Grade Ductal and Medullary, But Not in Lobular Breast Carcinomas. *Am J Pathol* 1990; 137(5):1059-1064.
- Rigaud C, Theobald S, Noel P and Badreddine J, et al. Medullary Carcinoma of the Breast. A Multicenter Study of Its Diagnostic Consistency. *Arch Pathol Lab Med* 1993; 117(10):1005-1008.
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- Wargotz ES and Silverberg SG. Medullary Carcinoma of the Breast. A Clinicopathologic Study with Appraisal of Current Diagnostic Criteria. *Hum Pathol* 1988; 19:1340-1346.



INLAND (Riverside/San Bernardino) - Secretory carcinoma (2); Lipid-rich carcinoma (2); Acute lactational mastitis with marked histiocytic hyperplasia (1)

BAKERSFIELD (Central Valley Study Group) - Metastatic renal cell carcinoma

ORANGE - Poorly differentiated infiltrating carcinoma of no special type

MONTEREY - Infiltrating carcinoma, glycogen rich (clear cell)

BAY AREA - Glycogen-rich carcinoma (3) (r/o trophoblastic tumor)

SANTA ROSA - Duct carcinoma, probably invasive (1); Anaplastic carcinoma, primary versus secondary (1); Choriocarcinoma versus poorly differentiated carcinoma (1)

LONG BEACH - Clear cell carcinoma (6)

SAN DIEGO (Naval Medical Center) - Apocrine carcinoma (14)

SACRAMENTO (UC Davis) - Apocrine/secretory carcinoma

HAYWARD (St. Rose Hospital) - Carcinoma, secretory (2); Glycogen –rich carcinoma (1); Infiltrating ductal carcinoma (apocrine vs. secretory) (3)

NEVADA (Reno) - Glycogen rich carcinoma; Lipid rich carcinoma

TEXAS (Texas Tech Regional Acad Hlth Ctr) - Infiltrating ductal carcinoma

NEBRASKA (Creighton Univ.) - Glycogen-rich carcinoma

ILLINOIS (Hinsdale Hospital) - Apocrine carcinoma (1); Anaplastic carcinoma with clear cell features (1)

MICHIGAN (Oakwood Hospital) - Invasive carcinoma with apocrine features

MICHIGAN (Ann Arbor) - Clear cell carcinoma (4)

FLORIDA (Tallahassee) - Ductal carcinoma, cannot rule out metastasis (renal, clear cell carcinoma, other) (2); Poorly differentiated ductal carcinoma (1)

FLORIDA (Orlando) - High grade ductal carcinoma, breast

OHIO (McCullough-Hyde Memorial Hospital) - Apocrine carcinoma

KENTUCKY (Baptist Hospital East) - Apocrine carcinoma (1); Secretory carcinoma with apocrine features (1)

LOUISIANA (Louisiana State Univ Med Ctr) - Secretory carcinoma

NORTH CAROLINA (WNC Pathology Group) - Glycogen-rich carcinoma (3); Clear cell (lipid-rich) carcinoma (1)

MARYLAND (Woodbine) - Glycogen-rich carcinoma (2)

MARYLAND (National Naval Medical Center) - Carcinoma with clear-cell features, NOS (10); Lipid-rich carcinoma (3)

WASHINGTON, D.C. (Walter Reed) - Carcinoma with clear cell features

PENNSYLVANIA (Conemaugh Memorial Hospital) - Glycogen-rich adenocarcinoma

PENNSYLVANIA (BB Group) - Carcinoma, Glycogen rich carcinoma

PENNSYLVANIA (Lehigh Valley Hospital) - Infiltrating ductal carcinoma with spindle cell features (1); Glycogen rich carcinoma (1)

NEW YORK (Northport) - Glycogen rich carcinoma

NEW JERSEY (Summit) - Lipid rich carcinoma (3)

MASSACHUSETTS (Berkshire Medical Center) - Hypersecretory carcinoma

CONNECTICUT (Univ Conn Health Ctr) - Clear cell carcinoma (favor metastatic renal cell carcinoma)

AUSTRALIA (Sydney) - Glassy cell carcinoma

**DIAGNOSIS:**

**SECRETORY CARCINOMA, BREAST**

T04010, M85023

CONSULTATION Robert McDivitt, M.D. “Juvenile Secretory Carcinoma.”

**REFERENCES:**

- Akhtar M, Robinson C, Ali MA and Godwin JT. Secretory Carcinoma of the Breast in Adults. Light and Electron Microscopic Study of Three Cases with Review of the Literature. *Cancer* 1983; 51(12):2245-2254.
- Krausz T, Jenkins D, Grontoft O, Pollock DJ and Azzopardi JG. Secretory Carcinoma of the Breast in Adults. Emphasis on Late Recurrence and Metastasis. *Histopathol* 1989; 14(1):25-36.
- Lamovec J and Bracko M. Secretory Carcinoma of the Breast. Light Microscopical, Immunohistochemical and Flow Cytometric Study. *Mod Pathol* 1994; 7(4):475-479.
- McDivitt RW and Stewart FW. Breast Carcinoma in Children. *JAMA* 1966; 195(5):388-390.

INLAND (Riverside/San Bernardino) - Malignant melanoma (1); Metastatic breast carcinoma in eye (2); Favor metastatic neoplasm, probable poorly differentiated adenocarcinoma. Would confirm with IPX (1); Consistent with metastatic breast carcinoma. Would r/o malignant melanoma (1)

BAKERSFIELD (Central Valley Study Group) - Diffuse large cell lymphoma

ORANGE - Metastatic carcinoma consistent with breast primary

MONTEREY - Metastatic carcinoma, possible melanoma

BAY AREA - Metastatic adenocarcinoma from breast, possibly lobular type (3)

SANTA ROSA - Metastatic carcinoma from breast (3)

LONG BEACH - Metastatic carcinoma to eye (6)

SAN DIEGO (Naval Medical Center) - Metastatic breast carcinoma (14)

SACRAMENTO (UC Davis) - Metastatic carcinoma

HAYWARD (St. Rose Hospital) - Metastatic carcinoma (breast favored over melanoma) (6)

NEVADA (Reno) - Metastatic carcinoma consistent with breast (2)

TEXAS (Texas Tech Regional Acad Hlth Ctr) - Metastatic adenocarcinoma, primary breast

NEBRASKA (Creighton Univ) - Metastatic breast carcinoma

ILLINOIS (Hinsdale Hospital) - Metastatic ductal carcinoma vs melanoma (1); Malignant neoplasm, etastatic adenocarcinoma vs malignant melanoma (1)

MICHIGAN (Oakwood Hospital) - Malignant neoplasm, favor metastatic breast carcinoma

MICHIGAN (Ann Arbor) - Ductal adenocarcinoma with neuroendocrine differentiation (4)

FLORIDA (Tallahassee) - Metastatic ductal carcinoma (4)

FLORIDA (Orlando) - Metastatic adenocarcinoma, consistent with breast primary

OHIO (McCullough-Hyde Memorial Hospital) - Metastatic breast cancer (? carcinoid vs carcinoma with endocrine features)

KENTUCKY (Baptist Hospital East) - Metastatic carcinoma, consistent with origin from breast (2)

LOUISIANA (Louisiana Univ Med Ctr) - Metastatic adenocarcinoma, posterior chamber eye

NORTH CAROLINA (WNC Pathology Group) - Consistent with metastatic breast carcinoma (2); Adenocarcinoma consistent with; need to r/o melanoma (1)

MARYLAND (Woodbine) - Papillary carcinoma (2)

MARYLAND (National Naval Medical Center) - Metastatic carcinoma, consistent with breast primary (14)

WASHINGTON, D.C. (Walter Reed) - Metastatic lobular carcinoma

PENNSYLVANIA (Conemaugh Memorial Hospital) - Metastatic breast carcinoma

PENNSYLVANIA (BB Group) - Metastatic carcinoma (primary ?)

PENNSYLVANIA (Lehigh Valley Hospital) - Favor adenocarcinoma – Compare to breast 1° and immunostains to r/o melanoma (1); Metastatic carcinoma to choroid membrane (1)

NEW YORK (Northport) - Metastatic breast carcinoma

NEW JERSEY (Summit) - Metastatic breast carcinoma to anterior chamber of eye (3)

MASSACHUSETTS (Berkshire Medical Center) - Mets breast carcinoma

CONNECTICUT (Univ Conn Health Ctr) - Metastatic breast carcinoma

AUSTRALIA (Sydney) - Metastatic carcinoma (melanoma to be excluded by HMB-45)

**DIAGNOSIS:**

**METASTATIC CARCINOMA TO EYE (CONSISTENT WITH BREAST ORIGIN)**

TXX310, M80106

**REFERENCES:**

RA Willis. The Spread of Tumours in the Human Body. Metastatic Tumour of The Eyes. Butterworth & Co. Publishers, LTD London, England. The C.V. Mosby Company. St Louis MO USA 1952; 296-297.

INLAND (Riverside/San Bernardino) - Lactating adenoma (5)  
BAKERSFIELD (Central Valley Study Group) - Lactating adenoma  
ORANGE - Lactating adenoma  
MONTEREY - Lactating adenoma  
BAY AREA - Lactational adenoma (3)  
SANTA ROSA - Lactation adenoma or “pure” adenoma (3)  
LONG BEACH - Lactating adenoma (6)  
SAN DIEGO (Naval Medical Center) - Lactating adenoma (14)  
SACRAMENTO (UC Davis) - Lactating adenoma  
HAYWARD (St. Rose Hospital) - Lactating adenoma (6)  
NEVADA (Reno) - Lactating adenoma (2)  
TEXAS (Texas Tech Regional Acad Hlth Ctr) - Lactating adenoma  
NEBRASKA (Creighton Univ) - Lactating adenoma  
ILLINOIS (Hinsdale Hospital) - Lactating adenoma  
MICHIGAN (Oakwood Hospital) - Lactational nodule  
MICHIGAN (Ann Arbor) - Lactating adenoma (4)  
FLORIDA (Tallahassee) - Tubular adenoma with secretory change (1); Lactating adenoma (2)  
FLORIDA (Orlando) - Lactating adenoma of breast  
OHIO (McCullough-Hyde Memorial Hospital) - Lactating adenoma  
KENTUCKY (Baptist Hospital East) - Lactating adenoma (2)  
LOUISIANA (Louisiana State Univ Med Ctr) - Lactating adenoma  
NORTH CAROLINA (WNC Pathology Group) - Lactating adenoma (4)  
MARYLAND (Woodbine) - Lactating adenoma (2)  
MARYLAND (National Naval Medical Center) - Lactating adenoma (14)  
WASHINGTON, D.C. (Walter Reed) - Lactating adenoma  
PENNSYLVANIA (Conemaugh Memorial Hospital) - Lactating adenoma  
PENNSYLVANIA (BB Group) - Lactating adenoma  
PENNSYLVANIA (Lehigh Valley Hospital) - Lactating adenoma (2)  
NEW YORK (Northport) - Lactating adenoma  
NEW JERSEY (Summit) - Lactating adenoma (3)  
MASSACHUSETTS (Berkshire Medical Center) - Lactating adenoma  
CONNECTICUT (Univ Conn Health Ctr) - Lactating adenoma  
AUSTRALIA (Sydney) - Lactating adenoma

**DIAGNOSIS:**

**LACTATING ADENOMA, BREAST**

T04000, M81400

**REFERENCES:**

Gill AJ, Stirman JA and Gordon CE. Latating Adenomas of Breast. *Tex Med J* 1953; 49:231-234.  
Hertel BF, Zaloudek C and Kempson RL. Breast Adenomas. *Cancer* 1976; 37:2891-2905.