



CALIFORNIA  
TUMOR TISSUE REGISTRY

## *BREAST PATHOLOGY*

Minutes – Subscription A

October 2013



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

- Sinuses mimicking adenocarcinoma of the gallbladder. A study of 8 cases. *Am J Surg Pathol* 2013; 37:1269-1274. Dorantes-Heredia R, Chable-Montero F, et al.
- A multicenter study directly comparing the diagnostic accuracy of gene expression profiling and immunohistochemistry for primary site identification in metastatic tumors. *Am J Surg Pathol* 2013; 37:1067-1075. Handorf CR, Kulkarni A, et al.
- Patil DT, Shadrach BL, et al. Proximal colon cancers and the serrated pathway: A systematic analysis of precursor histology and BRAF mutation status. *Mod Pathol* 2012; 25: 1423-1431.
- Borderline atypical ductal hyperplasia/low-grade ductal carcinoma in-situ on breast needle core biopsy should be managed conservatively. *Am J Surg Pathol* 2013; 37:913-923.
- Poor interobserver reproducibility in the diagnosis of high-grade endometrial carcinoma. *Am J Surg Pathol* 2013; 37:874-881.

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## **FILE DIAGNOSES**

**CTTR Subscription A**

**October 2013**

**Case 1:**

Galactocele in a lactating breast

**Case 2:**

Fibromatosis, breast

**Case 3:**

Tubular adenoma, breast

**Case 4:**

Intraductal papillomatosis with atypia, breast

**Case 5:**

Lactating adenoma, breast

**Case 6:**

Giant fibroadenoma, breast

**Case 7:**

Phyllodes tumor, breast

**Case 8:**

Adenoid cystic carcinoma, breast

**Case 9:**

Metaplastic carcinoma, breast

**Case 10:**

Metastatic mammary carcinoma to femur

Fontana (Kaiser Permanente) - Hamartoma  
Hayward/Fremont - Fibrocystic and lactational change  
Long Beach (Long Beach VA) - Lactational changes in breast tissue  
Oakland (Alameda County Medical Center) - Adenoma, benign  
San Diego (Naval Medical Center) - Lactational changes with duct ectasia  
Santa Barbara (Miramonte Laboratory) - Lactational adenoma  
Woodland Hills (Kaiser Permanente) - Mammary hamartoma  
Arkansas (Associated Pathologists Laboratory) - Proliferation fibrocystic changes  
Cleveland (Cleveland Clinic Residents) - Juvenile papillomatosis with lactation changes  
Colorado (Metropolitan Pathologists) - Fibrocystic changes  
Delaware (AFMES) - Fibrocystic and fibroadenomatous changes  
Florida, Boca Raton - Fibrocystic changes  
Florida (Gastro Enterology Associates of Ocala) - Cystic ductal hyperplasia  
Florida (Memorial Regional Hospital) - Hamartoma  
Florida (University of Florida) - Lactational hyperplasia  
Georgia, Atlanta - Lactational adenoma  
Georgia (Wellstar Healthcare System) - Lactational change (3); Galactocele (1)  
Illinois (Heartland Regional Medical Center) - Duct ectasia with cyst formation  
Illinois (Northwestern University) - Cystic dilatation and lactational changes  
Illinois, Oak Brook - Cystic ductal hyperplasia with gestational changes  
Kansas (Peterson Laboratory Services, P.A.) - Fibrocystic change with cystic hypersecretory change (2)  
Maryland (University of Maryland) - Hamartoma  
Massachusetts (University of Massachusetts Residents) - Lactational hyperplasia/galactocele  
Michigan (Henry Ford Hospital) - Fibrocystic changes  
Nebraska (Creighton University Medical Center) - Fibrocystic change  
New York (SUNY Health Science Center) - Fibroadenoma, complex  
Ohio (Summa Health System) - Fibroadenoma with lactational change and ectatic ducts  
Pennsylvania (Hahnemann University Hospital) - Lactation changes/fibrocystic changes  
Puerto Rico (University of Puerto Rico) - Galactocele  
South Carolina (Medical University of South Carolina) - Cystic hypersecretory hyperplasia  
Texas, Crystal Beach - Fibroadenomatous lesion with adenosis  
Washington (Seattle VAMC) - Interlobular duct ectasia/irregular intralobular hyperplasia and fibrous secretion  
Wisconsin (Medical Assessment and Consultation, S.C.) - Benign fibrocystic changes  
Wisconsin (Medical College of Wisconsin) - Benign breast tissue with fibroproliferative changes and lactational changes  
Australia (Royal Hobart Hospital) - Secretory hyperplastic (lactational) nodule  
Brazil (CIDAP) - Fibrocystic alterations of the breast  
Canada (Pasqua Hospital) - Benign cysts  
Canada (University of Sherbrooke) - Fibrocystic changes with lactescent metaplasia, breast  
Ireland (Bon Secours Hospital) - Fibrocystic change with lactational changes  
Ireland (Kerry General Hospital) - Fibrocystic disease  
Japan (Asahi General Hospital) - Lactating adenoma (1); Fibrocystic disease (1)  
Japan (Setagaya-Ku) - Fibrocystic disease  
Japan (Wakayama Medical University) - Duct ectasia with lactational change  
Oman (Sultanate of Azaiba) - Galactocele  
Saudi Arabia (King Khalid University Hospital) - Benign cystic disease of the breast with lactational changes  
Spain (Hospital Xeral) - Flat epithelial atypia  
United Kingdom (John Radcliffe Hospital) - Fibrocystic disease with adenosis and lactational change

**Case 1 - Diagnosis:**

Galactocele in a lactating breast

**Case 1 - References:**

Xanthogranulomatous reaction to a ruptured galactocele.  
*J Cutan Pathol* 2010; Sep;37(9): p973-6

Adams EG; Kemp JD, et al.

Cystic breast masses and the ACRIN 6666 experience.

*Radiol Clin North Am* 2010; Sep;48(5): p931-87

Berg WA; Sechtin AG, et al.

Breast cysts: a cause for rejoicing or concern?

*Int J Clin Pract* 2007; Feb;61(2): p185-6

Fentiman IS

Infected galactocele: a perplexing problem.

*Breast J* 2004; Mar-Apr;10(2): p159

Ghosh K; Morton MJ, et al.

About images with breast implants and galactocele.

*Plast Reconstr Surg* 2003; Dec;112(7): p1951-2; author reply 1952-3

Zimman OA

Galactocele in a young male patient.

*Plast Reconstr Surg* 2003; Jul;112(1): p186-8

Obrist P; Schwabegger A, et al.

## Case No. 2, Accession No. 31576

October 2013

Fontana (Kaiser Permanente) - Fibromatosis

Hayward/Fremont - Fibromatosis

Long Beach (Long Beach VA) - Low grade fibrosarcoma

Oakland (Alameda County Medical Center) - Fibromatosis, desmoid

San Diego (Naval Medical Center) - Fibromatosis

Santa Barbara (Miramonte Laboratory) - Low grade fibrosarcoma

Woodland Hills (Kaiser Permanente) - Fibromatosis

Arkansas (Associated Pathologists Laboratory) - Extra-abdominal fibromatosis

Cleveland (Cleveland Clinic Residents) - Fibromatosis

Colorado (Metropolitan Pathologists) - Fibromatosis

Delaware (AFMES) - Fibromatosis

Florida, Boca Raton - Desmoid (aggressive fibromatosis)

Florida (Gastro Enterology Associates of Ocala) - SFT

Florida (Memorial Regional Hospital) - Fibromatosis

Florida (University of Florida) - Fibromatosis

Georgia, Atlanta - Fibromatosis

Georgia (Wellstar Healthcare System) - Fibromatosis (3); Reactive fibroblastic proliferation (1)

Illinois (Heartland Regional Medical Center) - Fibromatosis, extra-abdominal

Illinois (Northwestern University) - Fibromatosis

Illinois, Oak Brook - Extra-abdominal fibromatosis

Kansas (Peterson Laboratory Services, P.A.) - Fibromatosis (2)

Maryland (University of Maryland) - Fibromatosis

Massachusetts (University of Massachusetts Residents) - Desmoid tumor (fibromatosis)

Michigan (Henry Ford Hospital) - Fibromatosis

Nebraska (Creighton University Medical Center) - Fibromatosis

New York (SUNY Health Science Center) - Fibromatosis

Ohio (Summa Health System) - Fibromatosis

Pennsylvania (Hahnemann University Hospital) - Fibromatosis

Puerto Rico (University of Puerto Rico) - Fibromatosis vs. post surgical scarring

South Carolina (Medical University of South Carolina) - Fibromatosis

Texas, Crystal Beach - Fibromatosis

Washington (Seattle VAMC) - Fibromatosis  
Wisconsin (Medical Assessment and Consultation, S.C.) - Spindle cell sarcoma, low grade  
Wisconsin (Medical College of Wisconsin) - Fibromatosis  
Australia (Royal Hobart Hospital) - Fibromatosis  
Brazil (CIDAP) - Fibromatosis  
Canada (Pasqua Hospital) - Fibromatosis  
Canada (University of Sherbrooke) - Desmoid type fibromatosis, breast  
Ireland (Bon Secours Hospital) - Fibromatosis  
Ireland (Kerry General Hospital) - Fibromatosis  
Japan (Asahi General Hospital) - Desmoid-type fibromatosis (1); Hypertrophic scar tissue (1)  
Japan (Setagaya-Ku) - Fibromatosis  
Japan (Wakayama Medical University) - Phyllodes tumor  
Oman (Sultanate of Azaiba) - Fibromatosis  
Saudi Arabia (King Khalid University Hospital) - Fibromatosis  
Spain (Hospital Xeral) - Fibromatosis  
United Kingdom (John Radcliffe Hospital) - Fibromatosis

## **Case 2 - Diagnosis:**

Fibromatosis, breast

## **Case 2 - References:**

Desmoid tumour of the breast.

*J Plast Reconstr Aesthet Surg* 2010; Feb;63(2): p339-45

Chummun S; McLean NR; Abraham S; Youseff M

Fibromatosis of the male breast: A case report with immunohistochemistry study and review of the literature.

*Clinics* (Sao Paulo 2006; Aug;61(4): p351-4

Macchetti AH; Marana HR, et al.

Fibromatosis-like metaplastic carcinoma of the breast as a diagnostic pitfall for fine needle aspiration cytology: a case report.

*Acta Cytol* 2010; Sep-Oct;54(5): p712-6

Jarboe E; Layfield LJ; Collins B

Chest wall spindle cell fibromatosis after breast augmentation.

*Plast Reconstr Surg* 2010; Aug;126(2): p94e-5e

Henderson PW; Singh SP; Spector JA

Unusual problems in breast cancer and a rare lung cancer case. Case 2. Aggressive fibromatosis of the chest wall arising near a breast prosthesis.

*J Clin Oncol* 2003; Jun 1;21(11): p2216-8

Khanfir K; Guinebretiere JM, et al.

[Breast implant and desmoid tumor: is there an etiological relation?]

*Handchir Mikrochir Plast Chir* 2004; Dec;36(6): p343-7

Jandali AR; Wedler V, et al.

## **Case No. 3, Accession No. 27913**

**October 2013**

Fontana (Kaiser Permanente) - Adenomyoepithelioma

Hayward/Fremont - Adenomyoepithelioma

Long Beach (Long Beach VA) - Adenomyoepithelioma

Oakland (Alameda County Medical Center) - Adenomyoepithelioma

San Diego (Naval Medical Center) - Adenomyoepithelioma

Santa Barbara (Miramonte Laboratory) - Microglandular adenosis  
Woodland Hills (Kaiser Permanente) - Tubular adenoma  
Arkansas (Associated Pathologists Laboratory) - Adenomyoepithelioma  
Cleveland (Cleveland Clinic Residents) - Adenomyoepithelioma  
Colorado (Metropolitan Pathologists) - Tubular adenoma  
Delaware (AFMES) - Adenomyoepithelioma  
Florida, Boca Raton - Benign adenoma  
Florida (Gastro Enterology Associates of Ocala) - Tubular adenoma  
Florida (Memorial Regional Hospital) - Adenomyoepithelioma  
Florida (University of Florida) - Tubular adenoma  
Georgia, Atlanta - Adenomyoepithelioma  
Georgia (Wellstar Healthcare System) - Adenomyoepithelioma (2); Myoepithelioma (2)  
Illinois (Heartland Regional Medical Center) - Tubular adenoma  
Illinois (Northwestern University) - Tubular adenoma with lactational changes  
Illinois, Oak Brook - Tubular adenoma  
Kansas (Peterson Laboratory Services, P.A.) - Tubular adenoma (2)  
Maryland (University of Maryland) - Adenomyoepithelioma  
Massachusetts (University of Massachusetts Residents) - Tubular adenoma  
Michigan (Henry Ford Hospital) - Hemangiopericytoma  
Nebraska (Creighton University Medical Center) - Adenomyoepithelioma  
New York (SUNY Health Science Center) - Tubular adenoma  
Ohio (Summa Health System) - Adenomyoepithelioma  
Pennsylvania (Hahnemann University Hospital) - Sclerosing adenoma  
Puerto Rico (University of Puerto Rico) - Tubular adenoma  
South Carolina (Medical University of South Carolina) - Myoepithelioma  
Texas, Crystal Beach - Lobular hyperplasia atypical with carcinoma  
Washington (Seattle VAMC) - Tubular adenoma  
Wisconsin (Medical Assessment and Consultation, S.C.) - Adenomyoepithelioma  
Wisconsin (Medical College of Wisconsin) - Tubular adenoma  
Australia (Royal Hobart Hospital) - Adenomyoepithelioma  
Brazil (CIDAP) - Adenomyoepithelioma  
Canada (Pasqua Hospital) - Adenomyoepithelioma  
Canada (University of Sherbrooke) - Adenomyoepithelioma, breast  
Ireland (Bon Secours Hospital) - Tubular adenoma  
Ireland (Kerry General Hospital) - Nodular adenosis  
Japan (Asahi General Hospital) - Microglandular adenosis (1); Myoepithelioma (1)  
Japan (Setagaya-Ku) - Malignant lymphoma  
Japan (Wakayama Medical University) - Tubular adenoma  
Oman (Sultanate of Azaiba) - Tubular adenoma  
Saudi Arabia (King Khalid University Hospital) - Benign tubular adenoma  
Spain (Hospital Xeral) - Tubular adenoma  
United Kingdom (John Radcliffe Hospital) - Tubular-fibroadenoma showing prominent lymphoplasmacytic infiltrate

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

Tubular adenoma, breast

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

Cytomorphology of tubular adenoma breast--a case report.  
*Indian J Pathol Microbiol* 2006; Apr;49(2): p267-8  
 Ravindra S; Suguna BV

Tubular adenomas of the breast: imaging findings with histologic correlation.  
*AJR Am J Roentgenol* 2000; Mar;174(3): p757-61  
 Soo MS; Dash N, et al.

Tubular adenoma of the breast with associated mucinous features: a cytological diagnostic trap.

*Cytopathology* 2010; Jun;21(3): p191-3  
Calderaro J; Bayou EH, et al.

MR imaging of tubular adenoma of breast associated with lactating change.  
*Breast J* 2009; Sep-Oct;15(5): p536-7  
Goto M; Yuen S; Nishimura T

**Case No. 4, Accession No. 26235**

**October 2013**

Fontana (Kaiser Permanente) - Florid hyperplasia  
Hayward/Fremont - Intraductal papillomata and usual ductal hyperplasia  
Long Beach (Long Beach VA) - Fibrocystic disease  
Oakland (Alameda County Medical Center) - Intraductal papillomatosis  
San Diego (Naval Medical Center) - Fibrocystic changes with usual ductal hyperplasia  
Santa Barbara (Miramonte Laboratory) - Intraductal papillomatosis  
Woodland Hills (Kaiser Permanente) - Intraductal papilloma  
Arkansas (Associated Pathologists Laboratory) - Atypical duct hyperplasia  
Cleveland (Cleveland Clinic Residents) - UDH involving an intraductal papilloma  
Colorado (Metropolitan Pathologists) - Intraductal papilloma  
Delaware (AFMES) - Proliferative fibrocystic changes with florid ductal hyperplasia and columnar cell change  
Florida, Boca Raton - Fibrocystic change with florid ductal hyperplasia  
Florida (Gastro Enterology Associates of Ocala) - Atypical ductal hyperplasia  
Florida (Memorial Regional Hospital) - Papillomatosis  
Florida (University of Florida) - Papillomatosis  
Georgia, Atlanta - Usual ductal hyperplasia and pseudoangiomatous stromal hyperplasia  
Georgia (Wellstar Healthcare System) - Intraductal papilloma (3); Juvenile papillomatosis (1)  
Illinois (Heartland Regional Medical Center) - Papillomatosis with ductal hyperplasia  
Illinois (Northwestern University) - Fibrocystic changes with florid ductal hyperplasia  
Illinois, Oak Brook - IDH, low risk  
Kansas (Peterson Laboratory Services, P.A.) - Florid intraductal hyperplasia with atypia (2)  
Maryland (University of Maryland) - Intraductal papilloma with florid ductal hyperplasia  
Massachusetts (University of Massachusetts Residents) - Papilloma with florid usual ductal hyperplasia  
Michigan (Henry Ford Hospital) - Juvenile papillomatosis  
Nebraska (Creighton University Medical Center) - Proliferative fibrocystic change  
New York (SUNY Health Science Center) - Papillomatosis with florid ductal hyperplasia  
Ohio (Summa Health System) - Intraductal papilloma with usual ductal hyperplasia  
Pennsylvania (Hahnemann University Hospital) - Fibrocystic changes with papillomas  
Puerto Rico (University of Puerto Rico) - Juvenile papillomatosis/fibrocystic changes  
South Carolina (Medical University of South Carolina) - Papillomas in a background of fibrocystic changes  
Texas, Crystal Beach - Intraductal hyperplasia with papillomatosis  
Washington (Seattle VAMC) - Intraductal hyperplasia  
Wisconsin (Medical Assessment and Consultation, S.C.) - Intraductal papillomatosis  
Wisconsin (Medical College of Wisconsin) - Florid usual ductal hyperplasia and intraductal papillomas  
Australia (Royal Hobart Hospital) - Proliferative breast disease (with papillomatosis, ductal epithelial hyperplasia and sclerosing adenosis)  
Brazil (CIDAP) - Intraductal papilloma  
Canada (Pasqua Hospital) - Multiple papillomas  
Canada (University of Sherbrooke) - Complex sclerosing lesion, breast  
Ireland (Bon Secours Hospital) - Florid epithelial hyperplasia  
Ireland (Kerry General Hospital) - Fibrocystic change with usual-type hyperplasia  
Japan (Asahi General Hospital) - Fibrocystic change (1); Fibrocystic disease with intraductal papillomatosis (1)  
Japan (Setagaya-Ku) - Intraductal papilloma  
Japan (Wakayama Medical University) - Fibrocystic disease with ductal hyperplasia  
Oman (Sultanate of Azaiba) - Fibrocystic disease  
Saudi Arabia (King Khalid University Hospital) - Intracystic papillary carcinoma in-situ

Spain (Hospital Xeral) - Intraductal papilloma/papillomatosis  
United Kingdom (John Radcliffe Hospital) - Intraductal papilloma

**Case 4 - Diagnosis:**

Intraductal papillomatosis with atypia, breast

**Case 4 - References:**

Florid papillomatosis of the male nipple.  
*Am J Surg* 2010; Sep;200(3): pe39-40  
Tuveri M; Calo PG, et al.

Multiple intraductal papillomas of breast clinically masquerading as malignancy.  
*Indian J Pathol Microbiol* 2010; Jan-Mar;53(1): p112-4  
Singh P; Misra V, et al.

Do breast columnar cell lesions with atypia need to be excised?  
*Am Surg* 2007; Oct;73(10): p984-6  
Datrice N; Narula N, et al.

Florid papillomatosis: A rare cause of bilateral giant breast lumps in the elderly.  
*Breast J* 2007; Jan-Feb;13(1): p95-7  
El-Saify WM

Mammary lesions diagnosed as "papillary" by aspiration biopsy: 70 cases with follow-up.  
*Cancer* 2003; Jun 25;99(3): p156-65  
Simsir A; Waisman J, et al.

**Case No. 5, Accession No. 26833**

**October 2013**

Fontana (Kaiser Permanente) - Tubular adenoma with lactational change  
Hayward/Fremont - Lactating adenoma  
Long Beach (Long Beach VA) - Lactating adenoma  
Oakland (Alameda County Medical Center) - Lactating adenoma  
San Diego (Naval Medical Center) - Lactating adenoma  
Santa Barbara (Miramonte Laboratory) - Lactational adenoma  
Woodland Hills (Kaiser Permanente) - Lactational adenoma with focal infarction  
Arkansas (Associated Pathologists Laboratory) - Lactating adenoma  
Cleveland (Cleveland Clinic Residents) - Lactating adenoma  
Colorado (Metropolitan Pathologists) - Lactating adenoma  
Delaware (AFMES) - Nodular lactational hyperplasia  
Florida, Boca Raton - Tubular adenoma  
Florida (Gastro Enterology Associates of Ocala) - Florid ductal hyperplasia  
Florida (Memorial Regional Hospital) - Tubular adenoma  
Florida (University of Florida) - Lactating adenoma  
Georgia, Atlanta - Pregnancy related change with focal infarction  
Georgia (Wellstar Healthcare System) - Lactating adenoma (3); Adenosis tumor (1)  
Illinois (Heartland Regional Medical Center) - Lactating adenoma  
Illinois (Northwestern University) - Lactating adenoma  
Illinois, Oak Brook - Lactating adenoma  
Kansas (Peterson Laboratory Services, P.A.) - Lactational adenoma (2)  
Maryland (University of Maryland) - Tubular adenoma  
Massachusetts (University of Massachusetts Residents) - Lactating adenoma  
Michigan (Henry Ford Hospital) - Lactating adenoma  
Nebraska (Creighton University Medical Center) - Lactating adenoma



New York (SUNY Health Science Center) - Lactating adenoma  
Ohio (Summa Health System) - Lactating adenoma, infarcted  
Pennsylvania (Hahnemann University Hospital) - Lactational adenoma  
Puerto Rico (University of Puerto Rico) - Lactating adenoma  
South Carolina (Medical University of South Carolina) - Lactational adenoma  
Texas, Crystal Beach - Lobular hyperplasia  
Washington (Seattle VAMC) - Lactating adenoma/organizing hamartoma  
Wisconsin (Medical Assessment and Consultation, S.C.) - Lactating adenoma  
Wisconsin (Medical College of Wisconsin) - Lactating adenoma  
Australia (Royal Hobart Hospital) - Ductal adenoma consistent with focal infarction  
Brazil (CIDAP) - Lactating adenoma  
Canada (Pasqua Hospital) - Tubular adenoma  
Canada (University of Sherbrooke) - Lactating adenoma, breast  
Ireland (Bon Secours Hospital) - Lactational adenoma  
Ireland (Kerry General Hospital) - Lactating adenoma  
Japan (Asahi General Hospital) - Tubular adenoma (2)  
Japan (Setagaya-Ku) - Lactating adenoma  
Japan (Wakayama Medical University) - Lactating adenoma  
Oman (Sultanate of Azaiba) - Lactational adenosis/adenoma  
Saudi Arabia (King Khalid University Hospital) - Lactating adenoma  
Spain (Hospital Xeral) - Lactating adenoma  
United Kingdom (John Radcliffe Hospital) - Lactating adenoma

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

Lactating adenoma, breast

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

Coexistence of lactating adenoma and invasive ductal adenocarcinoma of the breast in a pregnant woman.

*J Clin Pathol* 2005; Jan;58(1): p87-9

Saglam A; Can B

Multiple vulvar lactating adenomas.

*Obstet Gynecol* 2011; Aug;118(2 Pt 2): p478-80

Lee ES; Kim I

Lactation adenoma in a supernumerary nipple.

*J Cutan Pathol* 2011; Jun;38(6): p532-3

Kazakov DV; Kacerovska D; Michal M

[Lactating adenoma of the breast - differential diagnosis in pregnancy and during breast feeding]

*Rofo* 2012; Oct;184(10): p934-5

Daubner D; Friedrich K; Spieth S

#### **Case No. 6, Accession No. 26092**

**October 2013**

Fontana (Kaiser Permanente) - Fibroadenoma  
Hayward/Fremont - Fibroadenoma  
Long Beach (Long Beach VA) - Fibroadenoma  
Oakland (Alameda County Medical Center) - Fibroadenoma  
San Diego (Naval Medical Center) - Fibroadenoma  
Santa Barbara (Miramonte Laboratory) - Fibroadenoma  
Woodland Hills (Kaiser Permanente) - Fibroadenoma  
Arkansas (Associated Pathologists Laboratory) - Fibroadenoma  
Cleveland (Cleveland Clinic Residents) - Fibroadenoma

Colorado (Metropolitan Pathologists) - Fibroadenoma  
Delaware (AFMES) - Fibroadenoma  
Florida, Boca Raton - Fibroadenoma  
Florida (Gastro Enterology Associates of Ocala) - Fibroadenoma  
Florida (Memorial Regional Hospital) - Fibroadenoma  
Florida (University of Florida) - Fibroadenoma pericanalicular type  
Georgia, Atlanta - Phyllodes tumor, low grade  
Georgia (Wellstar Healthcare System) - Fibroadenoma (3); Phyllodes tumor (1)  
Illinois (Heartland Regional Medical Center) - Mammary hamartoma  
Illinois (Northwestern University) - Fibroadenoma  
Illinois, Oak Brook - Fibroadenoma  
Kansas (Peterson Laboratory Services, P.A.) - Benign phyllodes (2)  
Maryland (University of Maryland) - Fibroadenoma  
Massachusetts (University of Massachusetts Residents) - Benign phyllodes  
Michigan (Henry Ford Hospital) - Hamartoma  
Nebraska (Creighton University Medical Center) - Fibroadenoma  
New York (SUNY Health Science Center) - Giant fibroadenoma  
Ohio (Summa Health System) - Fibroadenoma with focal features of benign phyllodes  
Pennsylvania (Hahnemann University Hospital) - Fibroadenoma  
Puerto Rico (University of Puerto Rico) - Fibroadenoma (giant/complex?)  
South Carolina (Medical University of South Carolina) - Fibroadenoma  
Texas, Crystal Beach - Giant fibroadenoma  
Washington (Seattle VAMC) - Fibroadenoma  
Wisconsin (Medical Assessment and Consultation, S.C.) - Benign fibroadenoma variant  
Wisconsin (Medical College of Wisconsin) - Fibroadenoma  
Australia (Royal Hobart Hospital) - Fibroadenoma  
Brazil (CIDAP) - Giant fibroadenoma  
Canada (Pasqua Hospital) - Fibroadenoma  
Canada (University of Sherbrooke) - Fibroadenoma, breast  
Ireland (Bon Secours Hospital) - Mammary hamartoma  
Ireland (Kerry General Hospital) - Hamartoma  
Japan (Asahi General Hospital) - Fibroadenoma (2)  
Japan (Setagaya-Ku) - Fibrocystic disease  
Japan (Wakayama Medical University) - Fibroadenoma  
Oman (Sultanate of Azaiba) - Fibroadenoma  
Saudi Arabia (King Khalid University Hospital) - Fibroadenoma  
Spain (Hospital Xeral) - Fibroadenoma with focal pseudoangiomatous stromal hyperplasia  
United Kingdom (John Radcliffe Hospital) - Fibroadenoma

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

Giant fibroadenoma, breast

Director's note: The patient was 5' 5" and weighed 120 pounds. Because of this, the 11 cm tumor was designated in 1987 as a "giant fibroadenoma". (drc)

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

Giant juvenile fibroadenoma: experience from a university hospital.

*J Family Community Med* 2005; May;12(2): p91-5

Abdelhadi MS

Diagnosis and management of an unilateral giant fibroadenoma of the breast in pregnancy.

*Arch Gynecol Obstet* 2012; Jan;285(1): p235-7

Heilmann T; Leuschner I, et al.

Giant fibroadenoma in a 22 year old patient: case report and literature review.

*Breast Dis* 2010;;31(1): p49-52

McCague A; Davis JV

Breast asymmetry: presentation of a giant fibroadenoma.

*Breast J* 2006; Sep-Oct;12(5): p451-61

Park CA; David LR; Argenta LC

Giant fibroadenoma.

*Breast J* 2003; Jan-Feb;9(1): p53

Zacharia TT; Lakhar B, et al.

## Case No. 7, Accession No. 26041

October 2013

Fontana (Kaiser Permanente) - Phyllodes tumor, benign  
Hayward/Fremont - Phyllodes tumor  
Long Beach (Long Beach VA) - Phyllodes tumor  
Oakland (Alameda County Medical Center) - Phyllodes tumor  
San Diego (Naval Medical Center) - Borderline phyllodes tumor  
Santa Barbara (Miramonte Laboratory) - Phyllodes tumor  
Woodland Hills (Kaiser Permanente) - Phyllodes tumor, benign/low grade  
Arkansas (Associated Pathologists Laboratory) - Phyllodes tumor, low grade  
Cleveland (Cleveland Clinic Residents) - Benign phyllodes tumor  
Colorado (Metropolitan Pathologists) - Borderline phyllodes tumor  
Delaware (AFMES) - Phyllodes tumor  
Florida, Boca Raton - Phyllodes tumor  
Florida (Gastro Enterology Associates of Ocala) - Benign phyllodes tumor  
Florida (Memorial Regional Hospital) - Phyllodes tumor, malignant  
Florida (University of Florida) - Phyllodes tumor, borderline tumor  
Georgia, Atlanta - Phyllodes tumor, intermediate grade  
Georgia (Wellstar Healthcare System) - Phyllodes tumor (3); Fibroadenomatoid hyperplasia (1)  
Illinois (Heartland Regional Medical Center) - Phyllodes tumor  
Illinois (Northwestern University) - Borderline phyllodes tumor  
Illinois, Oak Brook - Phyllodes tumor, low grade  
Kansas (Peterson Laboratory Services, P.A.) - Malignant phyllodes (2)  
Maryland (University of Maryland) - Low grade phyllodes  
Massachusetts (University of Massachusetts Residents) - Malignant phyllodes  
Michigan (Henry Ford Hospital) - Phyllodes tumor  
Nebraska (Creighton University Medical Center) - Phyllodes, intermediate  
New York (SUNY Health Science Center) - Phyllodes tumor, borderline  
Ohio (Summa Health System) - Benign phyllodes tumor  
Pennsylvania (Hahnemann University Hospital) - Phyllodes with malignant potential  
Puerto Rico (University of Puerto Rico) - Benign phyllodes tumor, rule out borderline  
South Carolina (Medical University of South Carolina) - Phyllodes, low grade  
Texas, Crystal Beach - Phyllodes tumor  
Washington (Seattle VAMC) - Periductular and perilobular proliferating (phyllodes)  
Wisconsin (Medical Assessment and Consultation, S.C.) - Benign phyllodes neoplasm  
Wisconsin (Medical College of Wisconsin) - Phyllodes tumor, intermediate grade  
Australia (Royal Hobart Hospital) - Borderline phyllodes tumor  
Brazil (CIDAP) - Benign phyllodes tumor  
Canada (Pasqua Hospital) - Phyllodes tumor  
Canada (University of Sherbrooke) - Phyllodes tumor, benign, breast  
Ireland (Bon Secours Hospital) - Benign phyllodes tumor  
Ireland (Kerry General Hospital) - Phyllodes tumor  
Japan (Asahi General Hospital) - Phyllodes tumor (1); Mastopathy with inflammation (1)  
Japan (Setagaya-Ku) - Phyllodes tumor, benign  
Japan (Wakayama Medical University) - Phyllodes tumor, borderline  
Oman (Sultanate of Azaiba) - Phyllodes tumor, malignant

Saudi Arabia (King Khalid University Hospital) - Phyllodes tumor (borderline malignancy)  
Spain (Hospital Xeral) - Phyllodes tumor  
United Kingdom (John Radcliffe Hospital) - Benign phyllodes tumor

**Case 7 - Diagnosis:**

Phyllodes tumor, breast

**Case 7 - References:**

Histological features useful in the distinction of phyllodes tumour and fibroadenoma on needle core biopsy of the breast.

*Histopathology* 2007; Sep;51(3): p336-44

Lee AH; Hodi Z, et al.

Clinicopathologic features and long-term outcomes of 293 phyllodes tumors of the breast.

*Ann Surg Oncol* 2007; Oct;14(10): p2961-70

Barrio AV; Clark BD, et al.

Stromal keratin expression in phyllodes tumours of the breast: a comparison with other spindle cell breast lesions.

*J Clin Pathol* 2012; Apr;65(4): p339-47

Chia Y; Thike AA, et al.

Phyllodes tumor of the breast: role of CD10 in predicting metastasis.

*Ann Surg Oncol* 2012; Apr;19(4): p1181-4

Al-Masri M; Darwazeh G, et al.

Phyllodes tumours of the breast - differentiating features in core needle biopsy.

*Histopathology* 2011; Oct;59(4): p600-8

Tsang AK; Chan SK, et al.

Phyllodes tumours of the breast: a clinicopathological analysis of 65 cases from a single institution.

*Breast* 2009; Jun;18(3): p165-70

Karim RZ; Gerega SK, et al.

**Case No. 8, Accession No. 30163**

**October 2013**

Fontana (Kaiser Permanente) - Adenoid cystic carcinoma

Hayward/Fremont - Adenoid cystic carcinoma

Long Beach (Long Beach VA) - Adenoid cystic carcinoma

Oakland (Alameda County Medical Center) - Adenoid cystic carcinoma

San Diego (Naval Medical Center) - Adenoid cystic carcinoma

Santa Barbara (Miramonte Laboratory) - Adenoid cystic carcinoma

Woodland Hills (Kaiser Permanente) - Adenoid cystic carcinoma

Arkansas (Associated Pathologists Laboratory) - Adenoid cystic carcinoma

Cleveland (Cleveland Clinic Residents) - Adenoid cystic carcinoma

Colorado (Metropolitan Pathologists) - Adenoid cystic carcinoma

Delaware (AFMES) - Adenoid cystic carcinoma

Florida, Boca Raton - Adenoid cystic carcinoma

Florida (Gastro Enterology Associates of Ocala) - Adenoid cystic carcinoma

Florida (Memorial Regional Hospital) - Adenoid cystic carcinoma

Florida (University of Florida) - Adenoid cystic carcinoma

Georgia, Atlanta - Adenoid cystic carcinoma

Georgia (Wellstar Healthcare System) - Adenoid cystic carcinoma (4)

Illinois (Heartland Regional Medical Center) - Adenoid cystic carcinoma

Illinois (Northwestern University) - Adenoid cystic carcinoma

Illinois, Oak Brook - Adenoid cystic carcinoma  
Kansas (Peterson Laboratory Services, P.A.) - Adenoid cystic carcinoma (2)  
Maryland (University of Maryland) - Adenoid cystic carcinoma  
Massachusetts (University of Massachusetts Residents) - Adenoid cystic carcinoma  
Michigan (Henry Ford Hospital) - Adenoid cystic carcinoma  
Nebraska (Creighton University Medical Center) - Adenoid cystic carcinoma  
New York (SUNY Health Science Center) - Adenoid cystic carcinoma  
Ohio (Summa Health System) - Adenoid cystic carcinoma  
Pennsylvania (Hahnemann University Hospital) - Adenoid cystic adenoma  
Puerto Rico (University of Puerto Rico) - Adenoid cystic carcinoma  
South Carolina (Medical University of South Carolina) - Adenoid cystic carcinoma  
Texas, Crystal Beach - Secretory carcinoma  
Washington (Seattle VAMC) - Adenoid cystic and focal tubular carcinoma patterns  
Wisconsin (Medical Assessment and Consultation, S.C.) - Adenoid cystic carcinoma  
Wisconsin (Medical College of Wisconsin) - Adenoid cystic carcinoma  
Australia (Royal Hobart Hospital) - Adenoid cystic carcinoma  
Brazil (CIDAP) - Adenoid cystic carcinoma  
Canada (Pasqua Hospital) - Adenoid cystic carcinoma  
Canada (University of Sherbrooke) - Adenoid cystic carcinoma, breast  
Ireland (Bon Secours Hospital) - Invasive cribriform carcinoma  
Ireland (Kerry General Hospital) - Adenoid cystic carcinoma  
Japan (Asahi General Hospital) - Adenoid cystic carcinoma (1); Invasive ductal carcinoma (1)  
Japan (Setagaya-Ku) - Adenoid cystic carcinoma  
Japan (Wakayama Medical University) - Adenoid cystic carcinoma  
Oman (Sultanate of Azaiba) - Adenoid cystic carcinoma  
Saudi Arabia (King Khalid University Hospital) - Adenoid cystic carcinoma  
Spain (Hospital Xeral) - Adenoid cystic carcinoma  
United Kingdom (John Radcliffe Hospital) - Adenoid cystic carcinoma

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

Adenoid cystic carcinoma, breast

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

Adenoid cystic breast carcinoma: a salivary gland-type tumour with excellent prognosis and implications for management.

*Pathology* 2008; Jun;40(4): p413-5

Soon SR; Yong WS, et al.

Adenoid cystic carcinoma of the breast diagnosed by fine-needle aspiration.

*Diagn Cytopathol* 2004; Apr;30(4): p271-4

Saqi A; Mercado CL; Hamele-Bena D

Adenoid cystic carcinoma of the breast diagnosed by fine needle aspiration.

*Cytopathology* 2012; Jun;23(3): p205-7

Fargahi S; Gu M

Adenoid cystic carcinoma of breast, a special histopathologic type with excellent prognosis.

*Breast Cancer Res Treat* 2005; Oct;93(3): p189-90

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*J Clin Pathol* 2010; Mar;63(3): p220-8

Marchio C; Weigelt B; Reis-Filho JS

Expression of c-kit in adenoid cystic carcinoma of the breast.

*Am J Clin Pathol* 2005; Nov;124(5): p733-9

Crisi GM; Marconi SA, et al.

Adenoid cystic carcinoma arising in a fibroadenoma.

*Ann Diagn Pathol* 2005; Jun;9(3): p157-9

Blanco M; Egozi L, et al.

## Case No. 9, Accession No. 27928

October 2013

Fontana (Kaiser Permanente) - Metaplastic carcinoma

Hayward/Fremont - Metaplastic breast carcinoma

Long Beach (Long Beach VA) - Metaplastic carcinoma

Oakland (Alameda County Medical Center) - Metaplastic carcinoma

San Diego (Naval Medical Center) - Fibromatosis-like metaplastic carcinoma

Santa Barbara (Miramonte Laboratory) - Metaplastic carcinoma

Woodland Hills (Kaiser Permanente) - Metaplastic carcinoma

Arkansas (Associated Pathologists Laboratory) - Metaplastic carcinoma

Cleveland (Cleveland Clinic Residents) - Metaplastic carcinoma, matrix producing

Colorado (Metropolitan Pathologists) - Metaplastic carcinoma

Delaware (AFMES) - Metaplastic carcinoma

Florida, Boca Raton - Epithelioid hemangioendothelioma

Florida (Gastro Enterology Associates of Ocala) - Metaplastic carcinoma

Florida (Memorial Regional Hospital) - Spindle cell carcinoma

Florida (University of Florida) - Spindle cell carcinoma, low grade fibromatosis-like variant

Georgia, Atlanta - Metaplastic carcinoma

Georgia (Wellstar Healthcare System) - Spindle cell proliferation (myoepithelioma) (1); Granular cell tumor (1); Metaplastic carcinoma (1)

Illinois (Heartland Regional Medical Center) - Metaplastic carcinoma, spindle cell type

Illinois (Northwestern University) - Metaplastic carcinoma

Illinois, Oak Brook - Malignant stromal tumor

Kansas (Peterson Laboratory Services, P.A.) - Metaplastic carcinoma (2)

Maryland (University of Maryland) - Metaplastic carcinoma, spindle cell

Massachusetts (University of Massachusetts Residents) - Metaplastic carcinoma

Michigan (Henry Ford Hospital) - Carcinosarcoma

Nebraska (Creighton University Medical Center) - Metaplastic carcinoma

New York (SUNY Health Science Center) - Metaplastic carcinoma, predominantly spindle cell variant

Ohio (Summa Health System) - Metaplastic carcinoma vs. malignant Phyllodes

Pennsylvania (Hahnemann University Hospital) - Myoepithelial carcinoma

Puerto Rico (University of Puerto Rico) - Metaplastic carcinoma, spindle cell type

South Carolina (Medical University of South Carolina) - Metaplastic carcinoma

Texas, Crystal Beach - Angiolipoma

Washington (Seattle VAMC) - Spindle cell carcinoma

Wisconsin (Medical Assessment and Consultation, S.C.) - Metaplastic carcinoma (spindle cell type)

Wisconsin (Medical College of Wisconsin) - Matrix producing metaplastic carcinoma

Australia (Royal Hobart Hospital) - Spindle cell metaplastic carcinoma

Brazil (CIDAP) - Metaplastic carcinoma

Canada (Pasqua Hospital) - Spindle cell carcinoma

Canada (University of Sherbrooke) - Spindle cell carcinoma, breast

Ireland (Bon Secours Hospital) - Metaplastic carcinoma

Ireland (Kerry General Hospital) - Sarcomatoid carcinoma

Japan (Asahi General Hospital) - Spindle cell carcinoma (1); Metaplastic carcinoma (1)

Japan (Setagaya-Ku) - Metaplastic carcinoma

Japan (Wakayama Medical University) - Metaplastic carcinoma

Oman (Sultanate of Azaiba) - Metaplastic carcinoma (1); Malignant Phyllodes tumor (1)

Saudi Arabia (King Khalid University Hospital) - Metaplastic carcinoma  
Spain (Hospital Xeral) - Sarcomatoid carcinoma  
United Kingdom (John Radcliffe Hospital) - Metaplastic carcinoma

**Case 9 - Diagnosis:**

Metaplastic carcinoma, breast

**Case 9 - References:**

Giant cystic metaplastic carcinoma of the breast: a case report with diagnosis by fine needle aspiration.  
*Acta Cytol* 2006; May-Jun;50(3): p327-30  
Kumar PV; Monabati A, et al.

A case of breast carcinoma with cartilaginous and osseous metaplasia.  
*Breast Cancer* 2006;;13(2): p214-9  
Kijima Y; Umekita Y, et al.

Metaplastic carcinoma of the breast: a clinicopathological review.  
*J Clin Pathol* 2006; Oct;59(10): p1079-83  
Tse GM; Tan PH, et al.

Metaplastic breast carcinoma histologically mimicking cutaneous spindle cell squamous cell carcinoma.  
*Am J Dermatopathol* 2005; Jun;27(3): p250-4  
De Rienzo DP; Barr RJ

Clinicopathologic study of 53 metaplastic breast carcinomas: their elements and prognostic implications.  
*Hum Pathol* 2010; May;41(5): p679-85  
Yamaguchi R; Horii R, et al.

Metaplastic carcinoma of the breast.  
*Hum Pathol* 2010; Jul;41(7): p960-70  
Okada N; Hasebe T, et al.

Metaplastic carcinoma of the breast: cytological diagnosis and diagnostic pitfalls.  
*Acta Cytol* 2011;;55(4): p313-8  
Joshi D; Singh P, et al.

**Case No. 10, Accession No. 31643**

**October 2013**

Fontana (Kaiser Permanente) - Metastatic carcinoma  
Hayward/Fremont - Metastatic carcinoma consistent with breast origin  
Long Beach (Long Beach VA) - Metastatic ductal carcinoma  
Oakland (Alameda County Medical Center) - Metastatic adenocarcinoma, favor breast primary  
San Diego (Naval Medical Center) - Metastatic carcinoma  
Santa Barbara (Miramonte Laboratory) - Metastatic breast carcinoma  
Woodland Hills (Kaiser Permanente) - Metastatic ductal carcinoma  
Arkansas (Associated Pathologists Laboratory) - Metastatic ductal adenocarcinoma of breast  
Cleveland (Cleveland Clinic Residents) - Metastatic carcinoma, mixed ductal and lobular breast carcinoma  
Colorado (Metropolitan Pathologists) - Metastatic carcinoma consistent with breast primary  
Delaware (AFMES) - Metastatic adenocarcinoma, morphologically compatible with breast primary  
Florida, Boca Raton - Metastatic ductal adenocarcinoma consistent with breast  
Florida (Gastro Enterology Associates of Ocala) - Lobular carcinoma, metastatic  
Florida (Memorial Regional Hospital) - Metastatic carcinoma  
Florida (University of Florida) - Metastatic breast carcinoma, consistent with patient's history  
Georgia, Atlanta - Metastatic mammary carcinoma to femur

Georgia (Wellstar Healthcare System) - Metastatic carcinoma, consistent with breast primary (4)  
Illinois (Heartland Regional Medical Center) - Metastatic adenocarcinoma consistent with breast origin  
Illinois (Northwestern University) - Metastatic lobular carcinoma of breast  
Illinois, Oak Brook - Metastatic adenocarcinoma  
Kansas (Peterson Laboratory Services, P.A.) - Metastatic mammary carcinoma (2)  
Maryland (University of Maryland) - Lytic lesion of bone secondary to metastatic carcinoma  
Massachusetts (University of Massachusetts Residents) - Metastatic carcinoma  
Michigan (Henry Ford Hospital) - Metastatic invasive ductal carcinoma  
Nebraska (Creighton University Medical Center) - Metastatic carcinoma  
New York (SUNY Health Science Center) - Metastatic adenocarcinoma, most likely of breast origin  
Ohio (Summa Health System) - Metastatic carcinoma  
Pennsylvania (Hahnemann University Hospital) - Metastatic ductal carcinoma  
Puerto Rico (University of Puerto Rico) - Metastatic carcinoma  
South Carolina (Medical University of South Carolina) - Metastatic carcinoma consistent with ductal, nos  
Texas, Crystal Beach - Carcinoma metastatic ductal and lobular in bone  
Washington (Seattle VAMC) - Metastatic carcinoma  
Wisconsin (Medical Assessment and Consultation, S.C.) - Breast carcinoma metastatic to bone  
Wisconsin (Medical College of Wisconsin) - Metastatic ductal carcinoma of breast  
Australia (Royal Hobart Hospital) - Metastatic invasive duct carcinoma, breast  
Brazil (CIDAP) - Metastatic breast cancer  
Canada (Pasqua Hospital) - Metastatic duct carcinoma with squamous metaplasia  
Canada (University of Sherbrooke) - Metastatic carcinoma  
Ireland (Bon Secours Hospital) - Metastatic ductal carcinoma  
Ireland (Kerry General Hospital) - Metastatic carcinoma  
Japan (Asahi General Hospital) - Metastatic poorly differentiated adenocarcinoma (2)  
Japan (Setagaya-Ku) - Ductal carcinoma, metastatic  
Japan (Wakayama Medical University) - Metastatic adenocarcinoma, breast cancer  
Oman (Sultanate of Azaiba) - Metastatic ductal carcinoma  
Saudi Arabia (King Khalid University Hospital) - Metastatic mammary carcinoma  
Spain (Hospital Xeral) - Metastatic breast carcinoma  
United Kingdom (John Radcliffe Hospital) - Metastatic ductal carcinoma of the breast

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

Metastatic mammary carcinoma to femur

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

Heterotopic breast tissue versus occult metastatic carcinoma in lymph node, a diagnostic dilemma.  
*Ann Diagn Pathol* 2010; Aug;14(4): p260-3  
 Ohsie SJ; Moatamed NA, et al.

Utility of immunohistochemistry in distinguishing primary adenocarcinomas from metastatic breast carcinomas in the gastrointestinal tract.  
*Arch Pathol Lab Med* 2005; Mar;129(3): p338-47  
 O'Connell FP; Wang HH; Odze RD

Comparison of HER-2 overexpression in primary breast cancer and metastatic sites and its effect on biological targeting therapy of metastatic disease.  
*Br J Cancer* 2005; Sep 5;93(5): p552-6  
 Zidan J; Dashkovsky I, et al.