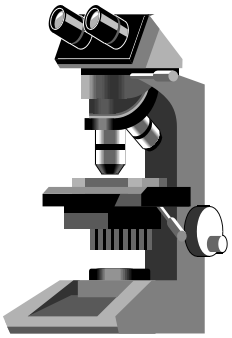
CALIFORNIA
TUMOR TISSUE REGISTRY

BREAST PATHOLOGY

Minutes – Subscription B

January 2012



SUGGESTED READING (General Topics from Recent Literature):

Natural History of Imatinib-Naïve GISTs: A Retrospective Analysis of 929 Cases With Long-Term Follow-Up and Development of a Survival Nomogram Based on Mitotic Index and Size as Continuous Variables. Rossi S, Miceli R, et al.. *Am J Surg Pathol* 2011; 35:1646-1656.

Extraneous Tissue: A Potential Source for Diagnostic Error in Surgical Pathology. Layfield IJ, Witt BL, et al. *Am J Clin Pathol* 2011; 136:767-772.

Quantifying The Extent of Invasive Carcinoma and Margin Status in Partial Mastectomy Cases Having a Gross Lesion: Is a Defined Tissue Processing Protocol Needed? Sneed GM and Duncan LD. *Am J Clin Pathol* 2011; 136: 747-753.

Focal Active colitis: A Prospective Study of Clinicopathological Correlations In 90 Patients. Shetty S, Anjarwalla SM, et al. *Histopathology* 2011; 59:850-856.

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FILE DIAGNOSES

CTTR Subscription B January 2012

Case 1:

Hibernoma involving fibroadenoma (adenohibernoma), breast
T-04000, M-90100

Case 2:

Lactating adenoma (lactation adenoma), breast
T-04000, M-81400

Case 3:

Juvenile papillomatosis, breast
T-04000, M-80600

Case 4:

Benign phyllodes tumor, breast
T-04000, M-90213

Case 5:

Intraductal papillary carcinoma (DCIS), breast
T-04000, M-80505

Case 6:

Infiltrating lobular carcinoma, signet ring cell variant, breast
T-04000, M-85203

Case 7:

Pleomorphic lobular carcinoma with neuroendocrine features, breast
T-04000, M-85203

Case 8:

Mucinous (colloid) carcinoma, *hypocellular variant*, breast
T-04000, M-84803

Case 9:

Mucinous (colloid) carcinoma, *hypercellular variant*, breast
T-04000, M-84803

Case 10:

Metaplastic carcinoma, breast
T-04000, M-80103

Case No. 1, Accession No. 24137 **January 2012**

Costa Mesa (College Hospital) - Granular cell tumor and fibroadenoma
Glendale - Hibernoma
North Carolina (Wake Forest University School of Medicine Residents) - Hiberoma
Orange (UCI Medical Center Residents) - Adenomyoepithelioma vs. granular cell tumor
Orinda (Kaiser Permanente Hospital) - Hibernoma involving sclerosing adenosis
San Diego (Naval Medical Center) - Hibernoma
Alabama (Cunningham Pathology) - Hibernoma
Florida, Orlando - Fibroadenoma and hibernoma
Georgia, Atlanta - Hibernoma
Illinois (Heartland Regional Medical Center) - Adenohibernoma
Kansas (Coffeyville Regional Medical Center) - Phyllodes tumor
Kansas (Peterson Laboratory Services) - Adenohibernoma
Maryland (University of Maryland) - Hibernoma
Michigan (Henry Ford Hospital Residents) - Hibernoma
New York (Buffalo General Hospital Residents) - Hibernoma
New York (SUNY Downstate Medical Center Residents) - Hibernoma
Ohio, Columbus - Benign phyllodes tumor with stromal component demonstrating brown fat differentiation (possible collision tumor fibroadenoma/hibernoma)
Oregon (Oregon Health Sciences University Residents) - Hibernoma involving fibroadenoma
Pennsylvania (Drexel University College of Medicine Residents) - Hibernoma
Pennsylvania (Wilkes-Barre General Hospital - Adenohibernoma of breast
Puerto Rico (University of Puerto Rico) - Adenohibernoma
South Carolina (Lexington Medical Center) - Hibernoma
Tennessee, Knoxville - Hibernoma
Texas, Crystal Beach - Apocrine adenosis
Texas, Lubbock - Granular cell tumor
Wisconsin, Madison - Hibernoma
Wisconsin (Medical Assessment and Consultation, S.C.) - Hibernoma involving breast
Wisconsin (The Medical College of Wisconsin) - Hibernoma
Australia (St. Vincent's Hospital, Sydney) - Hamartoma with brown fat
Canada (Pasqua Hospital) - Hibernoma
Canada (University of Sherbrooke) - Adenohibernoma, breast
Ireland (Connelly Hospital) - Hibernoma
Ireland (University Hospital, Galway) - Hibernoma
Japan (Asahi General Hospital) - Granular cell tumor (1); Adenosis tumor (1)
United Kingdom (Royal Berkshire Hospital) - Hibernoma

Case 1 - Diagnosis:

Hibernoma involving fibroadenoma (adenohibernoma), breast
T-04000, M-90100

Case 1 - References:

An unusual breast lesion: the ultrasonographic, mammographic, MRI and nuclear medicine findings of mammary hibernoma. *Br J Radiol* 2010; Jan;83(985): pe1-4. Martini N; Londero V, et al.

Cytomorphology of hibernoma: a report of 2 cases. *Acta Cytol* 2010; Sep-Oct;54(5 Suppl): p875-8. Thejasvi K; Niveditha SR, et al.

Case No. 2, Accession No. 12839 **January 2012**

Costa Mesa (College Hospital) - Lactating adenoma
Glendale - Lactating adenoma
North Carolina (Wake Forest University School of Medicine Residents) - Lactating adenoma

Orange (UCI Medical Center Residents) - Lactating adenoma
Orinda (Kaiser Permanente Hospital) - Lactating adenoma
San Diego (Naval Medical Center) - Lactating fibroadenoma
Alabama (Cunningham Pathology) - Lactating adenoma
Florida, Orlando - Lactating adenoma
Georgia, Atlanta - Lactational adenoma
Illinois (Heartland Regional Medical Center) - Lactating adenoma
Kansas (Coffeyville Regional Medical Center) - Lactating adenoma
Kansas (Peterson Laboratory Services) - Lactating adenoma
Maryland (University of Maryland) - Lactating adenoma
Michigan (Henry Ford Hospital Residents) - Lactating adenoma
New York (Buffalo General Hospital Residents) - Lactating adenoma with acute mastitis
New York Downstate Medical Center Residents) - Lactating adenoma
Ohio, Columbus - Lactating adenoma
Oregon (Oregon Health Sciences University Residents) - Lactational adenoma with focal infarction
Pennsylvania (Drexel University College of Medicine Residents) - Lactating adenoma
Pennsylvania (Wilkes-Barre General Hospital - Lactating adenoma
Puerto Rico (University of Puerto Rico) - Lactating adenoma
South Carolina (Lexington Medical Center) - Lactating adenoma
Tennessee, Knoxville - Lactating adenoma, partially infracted
Texas, Crystal Beach - Lactating adenoma
Texas, Lubbock - Lactating adenoma with infarct
Wisconsin, Madison - Lactation adenoma
Wisconsin (Medical Assessment and Consultation, S.C.) - Benign lacatational adenoma
Wisconsin (The Medical College of Wisconsin) - Lactating adenoma
Australia (St. Vincent's Hospital, Sydney) - Lactational change ("lactating adenoma")
Canada (Pasqua Hospital) - Lactating adenoma
Canada (University of Sherbrooke) - Lactating adenoma, breast
Ireland (Connelly Hospital) - Lactating adenoma
Ireland (University Hospital, Galway) - Lactating adenoma
Japan (Asahi General Hospital) - Lactating adenoma (1); Usual ductal hyperplasia (1)
United Kingdom (Royal Berkshire Hospital) - Lactating adenoma

Case 2 - Diagnosis:

Lactating adenoma (lactation adenoma), breast
T-04000, M-81400

Case 2 - 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.
Lactating adenoma - cytomorphologic study with review of literature. *Indian J Pathol Microbiol* 2001; Oct;44(4): p445-8. Choudhury M; Singal MK
Lactating adenoma: a diagnosis of exclusion. Breast J 2001; Sep-Oct;7(5): p354-7. Baker TP; Lenert JT; Parker J, et al.

Case No. 3, Accession No. 24346 January 2012

Costa Mesa (College Hospital) - Intraductal papillomatosis
Glendale - Juvenile papillomatosis
North Carolina (Wake Forest University School of Medicine Residents) - Papillomatosis with UDH
Orange (UCI Medical Center Residents) - Juvenile papillomatosis
Orinda (Kaiser Permanente Hospital) - Juvenile papillomatosis
San Diego (Naval Medical Center) - Juvenile papillomatosis
Alabama (Cunningham Pathology) - Juvenile papillomatosis
Florida, Orlando - Intraductal papilloma with florid ductal hyperplasia
Georgia, Atlanta - Ductal epithelial hyperplasia of the usual type

Illinois (Heartland Regional Medical Center) - Florid ductal hyperplasia with papillomatosis
Kansas (Coffeyville Regional Medical Center) - Juvenile papillomatosis
Kansas (Peterson Laboratory Services) - Papillomatosis
Maryland (University of Maryland) - Florid ductal hyperplasia with fibrocystic changes and intraductal papillomas
Michigan (Henry Ford Hospital Residents) - Intraductal papillomatosis
New York (Buffalo General Hospital Residents) - Papillomatosis with usual ductal hyperplasia
New York (SUNY Downstate Medical Center Residents) - Juvenile papillomatosis
Ohio, Columbus - Florid usual ductal hyperplasia
Oregon (Oregon Health Sciences University Residents) - Juvenile papillomatosis
Pennsylvania (Drexel University College of Medicine Residents) - Florid intraductal hyperplasia
Pennsylvania (Wilkes-Barre General Hospital - Juvenile papillomatosis
Puerto Rico (University of Puerto Rico) - Juvenile papillomatosis
South Carolina (Lexington Medical Center) - Juvenile papillomatosis
Tennessee, Knoxville - Papillomatosis
Texas, Crystal Beach - Ductal hyperplasia micropapillary, florid
Texas, Lubbock - Intraductal papillomatosis
Wisconsin, Madison - Juvenile papillomatosis
Wisconsin (Medical Assessment and Consultation, S.C.) - Benign "florid" papillomatosis
Wisconsin (The Medical College of Wisconsin) - Juvenile papillomatosis
Australia (St. Vincent's Hospital, Sydney) - Juvenile papillomatosis
Canada (Pasqua Hospital) - Juvenile papillomatosis
Canada (University of Sherbrooke) - Intraductal papillomatosis, breast
Ireland (Connelly Hospital) - Papillomas/papillary hyperplasia
Ireland (University Hospital, Galway) - Juvenile intraductal papillomatosis
Japan (Asahi General Hospital) - Ductal intraepithelial neoplasia, grade 2 (1); Intraductal papilloma (1)
United Kingdom (Royal Berkshire Hospital) - Adenomyoepithelioma

Case 3 - Diagnosis:

Juvenile papillomatosis, breast
T-04000, M-80600

Case 3 - References:

Juvenile papillomatosis (JP) of the female breast (Swiss Cheese Disease) --role of breast ultrasonography. *Ultraschall Med* 2005; Feb;26(1): p42-5. Ohlinger R; Schwesinger G, et al.

Juvenile papillomatosis of the breast in a 9-year-old girl. *Pediatr Surg Int* 2001; Mar;17(2-3): p206-8.Hsieh SC; Chen KC, et al.

From the archives of the AFIP: breast masses in children and adolescents: radiologic-pathologic correlation. *Radiographics* 2009; May-Jun;29(3): p907-31. Chung EM; Cube R, et al.

Florid papillomatosis of the male nipple. *Am J Surg* 2010; Sep;200(3): pe39-40. Tuveri M; Calo PG; Mocci C; Nicolosi A.

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.

Case No. 4, Accession No. 12816 January 2012

Costa Mesa (College Hospital) - Phyllodes tumor
Glendale - Low grade phyllodes tumor
Loma Linda - Phyllodes tumor of breast, benign
North Carolina (Wake Forest University School of Medicine Residents) - Benign phyllodes tumor
Orange (UCI Medical Center Residents) - Benign phyllodes tumor
Orinda (Kaiser Permanente Hospital) - Benign phyllodes tumor
San Diego (Naval Medical Center) - Phyllodes tumor, benign
Alabama (Cunningham Pathology) - Phyllodes tumor
Florida, Orlando - Phyllodes tumor
Georgia, Atlanta - Low grade phyllodes tumor

Illinois (Heartland Regional Medical Center) - Phyllodes tumor, benign
Kansas (Coffeyville Regional Medical Center) - Benign phyllodes tumor
Kansas (Peterson Laboratory Services) - Phyllodes tumor
Maryland (University of Maryland) - Low grade phyllodes tumor
Michigan (Henry Ford Hospital Residents) - Benign phyllodes tumor
New York (Buffalo General Hospital Residents) - Benign phyllodes tumor
New York (SUNY Downstate Medical Center Residents) - Benign phyllodes tumor
Ohio, Columbus - Borderline vs. malignant phyllodes tumor
Oregon (Oregon Health Sciences University Residents) - Phyllodes tumor (WHO classification, benign)
Pennsylvania (Drexel University College of Medicine Residents) - Phyllodes tumor, benign
Pennsylvania (Wilkes-Barre General Hospital - Phyllodes tumor, benign
Puerto Rico (University of Puerto Rico) - Benign phyllodes tumor
South Carolina (Lexington Medical Center) - Fibroadenoma with myxoid stroma
Tennessee, Knoxville - Phyllodes tumor
Texas, Crystal Beach - Phyllodes tumor
Texas, Lubbock - Benign phyllodes tumor
Wisconsin, Madison - Phyllodes tumor
Wisconsin (Medical Assessment and Consultation, S.C.) - Low grade "benign" phyllodes neoplasm
Wisconsin (The Medical College of Wisconsin) - Benign phyllodes tumor
Australia (St. Vincent's Hospital, Sydney) - Phyllodes tumor, low grade
Canada (Pasqua Hospital) - Phyllodes tumor
Canada (University of Sherbrooke) - Phyllodes tumor, breast
Ireland (Connelly Hospital) - Phyllodes tumor
Ireland (University Hospital, Galway) - Phyllodes tumor, low grade
Japan (Asahi General Hospital) - Phyllodes tumor (2)
United Kingdom (Royal Berkshire Hospital) - Phyllodes tumor

Case 4 - Diagnosis:

Benign phyllodes tumor, breast
T-04000, M-90213

Case 4 - References:

Benign intracystic phyllodes tumor of breast. Indian *J Pathol Microbiol* 2010; Apr-Jun;53(2): p385-6. Santosh KV; Sumana BS.

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; Ellis IO; Elston CW

Phyllodes tumors of the breast diagnostic and therapeutic dilemmas. *Onkologie* 2007; Mar;30(3): p113-8. Fajdic J; Gotovac N, et al.

Phyllodes tumour with intraductal growth: a rare cause of nipple discharge. *Histopathology* 2007; Apr;50(5): p666-9. Lian D; Cheah E, et al.

Invasive ductal breast cancer within a malignant phyllodes tumor: case report and assessment of clonality. *Hum Pathol* 2010 Feb;41(2): p293-6. Macher-Goeppinger S; Marme F, et al.

Case No. 5, Accession No. 20851 January 2012

Costa Mesa (College Hospital) - Intraductal papillomatosis with focal atypical duct hyperplasia
Glendale - Low grade DCIS
Loma Linda - Duct papillomatosis
North Carolina (Wake Forest University School of Medicine Residents) - Intraductal papilloma with DCIS
Orange (UCI Medical Center Residents) - Papillary DCIS
Orinda (Kaiser Permanente Hospital) - Ductal carcinoma in-situ
San Diego (Naval Medical Center) - Atypical sclerosing papillary lesion
Alabama (Cunningham Pathology) - Intracystic papillary carcinoma
Florida, Orlando - Ductal carcinoma in-situ
Georgia, Atlanta - Ductal carcinoma in-situ harboring microcalcifications

Illinois (Heartland Regional Medical Center) - Ductal carcinoma in-situ, low grade
Kansas (Coffeyville Regional Medical Center) - Florid papillomatosis
Kansas (Peterson Laboratory Services) - DCIS, low grade
Maryland (University of Maryland) - DCIS, low grade, cribriform micropapillary and papillary types, with microcalcifications
Michigan (Henry Ford Hospital Residents) - Intraductal papilloma with DCIS
New York (Buffalo General Hospital Residents) - DCIS, cannot rule out invasion
New York (SUNY Downstate Medical Center Residents) - DCIS, papillary and cribriform types
Ohio, Columbus - Ductal carcinoma in-situ, low grade
Oregon (Oregon Health Sciences University Residents) - Ductal carcinoma in-situ, nuclear grade, low grade
Pennsylvania (Drexel University College of Medicine Residents) - DCIS arising from florid gynecomastia
Pennsylvania (Wilkes-Barre General Hospital - Ductal carcinoma in-situ, low-grade, multiple patterns without necrosis
Puerto Rico (University of Puerto Rico) - Ductal carcinoma in-situ
South Carolina (Lexington Medical Center) - Ductal carcinoma in-situ
Tennessee, Knoxville - DCIS, cribriform and papillary types
Texas, Crystal Beach - Intraductal papillary carcinoma, early
Texas, Lubbock - Intraductal papillary ductal carcinoma
Wisconsin, Madison - DCIS, low grade
Wisconsin (Medical Assessment and Consultation, S.C.) - Micropapillary carcinoma
Wisconsin (The Medical College of Wisconsin) - Ductal carcinoma in-situ associated with intraductal papillary lesion
Australia (St. Vincent's Hospital, Sydney) - Ductal carcinoma in-situ, low grade, various patterns
Canada (Pasqua Hospital) - DCIS
Canada (University of Sherbrooke) - Ductal carcinoma in-situ, breast
Ireland (Connelly Hospital) - DCIS
Ireland (University Hospital, Galway) - Low grade DCIS, papillary and cribriform subtypes
Japan (Asahi General Hospital) - Ductal intraepithelial neoplasia, grade 3 (1); Intraductal papilloma (1)
United Kingdom (Royal Berkshire Hospital) - Papillary carcinoma in-situ

Case 5 - Diagnosis:

Intraductal papillary carcinoma (DCIS), breast
T-04000, M-80505

Case 5 - References:

Papillary lesions of the breast. *Breast J* 2006; May-Jun;12(3): p237-51. Ibarra JA.
Myoepithelial cells in solid variant of intraductal papillary carcinoma of the breast: a potential diagnostic pitfall and a proposal of an immunohistochemical panel in the differential diagnosis with intraductal papilloma with usual ductal hyperplasia. *Virchows Arch* 2007; May;450(5): p539-47. Moritani S; Ichihara S, et al.
Solid papillary ductal carcinoma in situ versus usual ductal hyperplasia in the breast: a potentially difficult distinction resolved by cytokeratin 5/6.. *Hum Pathol* 2006; Jul;37(7): p787-93. Rabban JT; Koerner FC; Lerwill MF.
Intracystic papillary carcinomas of the breast: a reevaluation using a panel of myoepithelial cell markers. *Am J Surg Pathol* 2006; Aug;30(8): p1002-7. Collins LC; Carlo VP; Hwang H; Barry TS; Gown AM; Schnitt SJ.
Papillary neoplasms of the breast: a review. *Arch Pathol Lab Med* 2009; Jun;133(6): p893-907. Ueng SH; Mezzetti T; Tavassoli FA.

Case No. 6, Accession No. 24415 January 2012

Costa Mesa (College Hospital) - Invasive lobular carcinoma
Glendale - Lobular carcinoma with signet-ring cell features
Loma Linda - Infiltrating lobular carcinoma
North Carolina (Wake Forest University School of Medicine Residents) - Invasive lobular carcinoma
Orange (UCI Medical Center Residents) - Invasive lobular carcinoma, signet cell type
Orinda (Kaiser Permanente Hospital) - Invasive lobular carcinoma
San Diego (Naval Medical Center) - Signet ring cell carcinoma
Alabama (Cunningham Pathology) - Lobular carcinoma, pleomorphic type
Florida, Orlando - Signet ring cell carcinoma

Georgia, Atlanta - Invasive lobular carcinoma
Illinois (Heartland Regional Medical Center) - Lobular carcinoma (rule out metastatic signet ring carcinoma)
Kansas (Coffeyville Regional Medical Center) - Infiltrating lobular carcinoma and fibrocystic condition
Kansas (Peterson Laboratory Services) - Invasive lobular carcinoma
Maryland (University of Maryland) - Invasive lobular carcinoma
Michigan (Henry Ford Hospital Residents) - Pleomorphic invasive lobular carcinoma
New York (Buffalo General Hospital Residents) - Invasive lobular carcinoma
New York (SUNY Downstate Medical Center Residents) - Signet ring cell carcinoma
Ohio, Columbus - Signet ring cell adenocarcinoma
Oregon (Oregon Health Sciences University Residents) - Invasive lobular carcinoma, modified Bloom-Richardson grade 1/3 tubular formation (3); Nuclear pleomorphism (1); Mitosis (1)
Pennsylvania (Drexel University College of Medicine Residents) - Invasive lobular carcinoma
Pennsylvania (Wilkes-Barre General Hospital - Invasive lobular carcinoma, signet ring cell variant
Puerto Rico (University of Puerto Rico) - Invasive lobular carcinoma, grade 2
South Carolina (Lexington Medical Center) - Invasive lobular carcinoma, signet ring cell varient
Tennessee, Knoxville - Invasive lobular carcinoma
Texas, Crystal Beach - Signet ring infiltrating probably lobular carcinoma
Texas, Lubbock - Infiltrating ductal carcinoma
Wisconsin, Madison - Signet ring carcinoma
Wisconsin (Medical Assessment and Consultation, S.C.) - Signet ring cell carcinoma (consistent with variant of infiltrating lobular carcinoma)
Wisconsin (The Medical College of Wisconsin) - Invasive lobular carcinoma, mammary, signet ring cell variant
Australia (St. Vincent's Hospital, Sydney) - Lobular carcinoma
Canada (Pasqua Hospital) - Invasive lobular carcinoma and LCIS
Canada (University of Sherbrooke) - Invasive lobular carcinoma, signet ring cell variant, breast
Ireland (Connelly Hospital) - Lobular carcinoma with LCIS
Ireland (University Hospital, Galway) - Signet ring adenocarcinoma (primary vs. metastatic)
Japan (Asahi General Hospital) - Invasive lobular carcinoma (1); Invasive ductal carcinoma (1)
United Kingdom (Royal Berkshire Hospital) - Infiltrating lobular carcinoma with LCIS

Case 6 - Diagnosis:

Infiltrating lobular carcinoma, signet ring cell variant, breast
T-04000, M-85203

Case 6 - References:

Pleomorphic lobular carcinoma in situ of the breast composed almost entirely of signet ring cells. *Pathol Int* 2006; Nov;56(11): p683-7. Fadare O.

Signet ring cells in fine needle aspiration cytology of breast carcinomas: review of the cytological findings in ten cases identified by histology. *Cytopathology* 2009; Oct;20(5): p321-7. Kelten C; Akbulut M, et al.

Lobular carcinoma of the breast with extracellular mucin: new variant of mucin-producing carcinomas? *Pathol Int* 2009; Jun;59(6): p405-9. Rosa M; Mohammadi A; Masood S

Mucin profiles in signet-ring cell carcinoma. *Arch Pathol Lab Med* 2006; Jun;130(6): p799-804. Nguyen MD; Plasil B; Wen P; Frankel WL

Gastric metastasis of signet ring cell carcinoma of the breast. *Saudi Med J* 2006; Feb;27(2): p259-61. Cetintas SK; Kurt M, et al.

Case No. 7, Accession No. 20991 January 2012

Costa Mesa (College Hospital) - Solid type poorly differentiated lobular carcinoma
Glendale - Carcinoma with giant cell features
Loma Linda - Infiltrating duct carcinoma
North Carolina (Wake Forest University School of Medicine Residents) - Ductal carcinoma, high grade
Orange (UCI Medical Center Residents) - High grade carcinoma, pleomorphic lobular carcinoma vs. high grade neuroendocrine carcinoma
Orinda (Kaiser Permanente Hospital) - Grade 3 invasive mammary carcinoma

San Diego (Naval Medical Center) - Poorly differentiated mammary carcinoma
Alabama (Cunningham Pathology) - Pleomorphic carcinoma
Florida, Orlando - Neuroendocrine carcinoma, large cell type
Georgia, Atlanta - High grade mammary carcinoma, rule out pleomorphic lobular carcinoma
Illinois (Heartland Regional Medical Center) - Ductal carcinoma, poorly differentiated
Kansas (Coffeyville Regional Medical Center) - Poorly differentiated ductal carcinoma
Kansas (Peterson Laboratory Services) - Invasive ductal carcinoma, high grade
Maryland (University of Maryland) - Metaplastic mammary carcinoma with osteoclast-like giant cells and neuroendocrine features
Michigan (Henry Ford Hospital Residents) - Large cell neuroendocrine carcinoma
New York (Buffalo General Hospital Residents) - Large cell neuroendocrine carcinoma
New York (SUNY Downstate Medical Center Residents) - Poorly differentiated carcinoma vs. melanoma
Ohio, Columbus - Invasive ductal carcinoma, grade 3
Oregon (Oregon Health Sciences University Residents) - High grade mammary carcinoma (differential diagnosis include: pleomorphic lobular carcinoma, neuroendocrine carcinoma, invasive ductal carcinoma, NOS, and metastasis)
Pennsylvania (Drexel University College of Medicine Residents) - Mammary carcinoma with osteoclast like giant cells
Pennsylvania (Wilkes-Barre General Hospital - Invasive pleomorphic lobular carcinoma, solid type
Puerto Rico (University of Puerto Rico) - Invasive ductal carcinoma, grade 3 vs. pleomorphic lobular carcinoma
South Carolina (Lexington Medical Center) - High grade invasive lobular carcinoma
Tennessee, Knoxville - Pleomorphic lobular carcinoma (need IHC to confirm)
Texas, Crystal Beach - Infiltrating lobular caricnoma
Texas, Lubbock - Infiltrating ductal carcinoma
Wisconsin, Madison - Breast carcinoma, NOS
Wisconsin (Medical Assessment and Consultation, S.C.) - Infiltrating carcinoma with neuroendocrine features and osteoclast like cells (would do IHC, rule out melanoma)
Wisconsin (The Medical College of Wisconsin) - Invasive ductal carcinoma, with medullary features (vs. pleomorphic lobular carcinoma)
Australia (St. Vincent's Hospital, Sydney) - Large cell neuroendocrine carcinoma, primary vs. metastatic
Canada (Pasqua Hospital) - Invasive lobular carcinoma
Canada (University of Sherbrooke) - Solid papillary carcinoma invasive, breast
Ireland (Connelly Hospital) - Atypical medullary carcinoma
Ireland (University Hospital, Galway) - Invasive ductal carcinoma, grade 3
Japan (Asahi General Hospital) - Poorly differentiated endocrine carcinoma (1); Medullary carcinoma of breast (1)
United Kingdom (Royal Berkshire Hospital) - Pleomorphic lobular carcinoma

Case 7 - Diagnosis:

Pleomorphic lobular carcinoma with neuroendocrine features, breast
T-04000, M-85203

Case 7 - References:

Is pleomorphic lobular carcinoma really a distinct clinical entity? *J Surg Oncol* 2008 Oct 1;98(5): p314-7. Buchanan CL; Flynn LW, et al.
Pleomorphic lobular carcinoma in situ (PLCIS) on breast core needle biopsies: clinical significance and immunoprofile. *Am J Surg Pathol* 2008 Nov;32(11): p1721-6. Chivukula M; Haynik DM, et al.
Pleomorphic lobular carcinoma in situ of the breast composed almost entirely of signet ring cells.. *Pathol Int* 2006 Nov;56(11): p683-7. Fadare O.
Lobular breast carcinoma and its variants. *Semin Diagn Pathol* 2010; Feb;27(1): p49-61. Rakha EA; Ellis IO.
Lobular neoplasia: morphology, biological potential and management in core biopsies. *Mod Pathol* 2010; May;23 Suppl 2:S14-25. O'Malley FP.

Costa Mesa (College Hospital) - Mucinous carcinoma
Glendale - Mucinous carcinoma
Loma Linda - Colloid carcinoma of breast
North Carolina (Wake Forest University School of Medicine Residents) - Mucinous carcinoma
Orange (UCI Medical Center Residents) - Colloid caricnoma
Orinda (Kaiser Permanente Hospital) - Mucinous carcinoma
San Diego (Naval Medical Center) - Mucinous carcinoma
Alabama (Cunningham Pathology) - Mucocele-like tumor
Florida, Orlando - Mucinous carcinoma
Georgia, Atlanta - Mucinous colloid carcinoma (type A)
Illinois (Heartland Regional Medical Center) - Mucinous carcinoma
Kansas (Coffeyville Regional Medical Center) - Mucinous (colloid) carcinoma
Kansas (Peterson Laboratory Services) - Mucinous carcinoma, type A
Maryland (University of Maryland) - Invasive mucinous carcinoma
Michigan (Henry Ford Hospital Residents) - Mucinous carcinoma
New York (Buffalo General Hospital Residents) - Mucinous carcinoma
New York (SUNY Downstate Medical Center Residents) - Mucinous carcinoma
Ohio, Columbus - Mucinous adenocarcinoma (colloid carcinoma)
Oregon (Oregon Health Sciences University Residents) - Invasive mucinous carcinoma, hypocellular variant
Pennsylvania (Drexel University College of Medicine Residents) - Mucinous carcinoma
Pennsylvania (Wilkes-Barre General Hospital - Mucinous colloid carcinoma
Puerto Rico (University of Puerto Rico) - Invasive mucinous carcinoma, grade 2
South Carolina (Lexington Medical Center) - Mucinous carcinoma
Tennessee, Knoxville - Mucinous (colloid) carcinoma
Texas, Crystal Beach - Mucinous carcinoma
Texas, Lubbock - Mucinous carcinoma
Wisconsin, Madison - Mucinous carcinoma
Wisconsin (Medical Assessment and Consultation, S.C.) - Mucinous (colloid) carcinoma
Wisconsin (The Medical College of Wisconsin) - Mucinous carcinoma
Australia (St. Vincent's Hospital, Sydney) - Mucinous carcinoma
Canada (Pasqua Hospital) - Mucinous carcinoma
Canada (University of Sherbrooke) - Mucinous carcinoma, breast
Ireland (Connelly Hospital) - Mucinous carcinoma
Ireland (University Hospital, Galway) - Mucinous adenocarcinoma
Japan (Asahi General Hospital) - Mucinous carcinoma, type A (2)
United Kingdom (Royal Berkshire Hospital) - Mucinous carcinoma

Case 8 - Diagnosis:

Mucinous (colloid) carcinoma, *hypocellular variant*, breast
T-04000, M-84803

Case 8 - References:

Mucinous breast lesions: diagnostic challenges. *J Clin Pathol* 2008; Jan;61(1): p11-9. Tan PH; Tse GM; Bay BH.

Pure mucinous carcinoma of the breast with extensive psammomatous calcification. *Histopathology* 2008; Apr;52(5): p650-2. Rao P; Lyons B.

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Costa Mesa (College Hospital) - Secretory carcinoma
Glendale - Mucinous carcinoma
Loma Linda - Mucinous breast carcinoma, type B
North Carolina (Wake Forest University School of Medicine Residents) - Ductal carcinoma with mucinous feature
Orange (UCI Medical Center Residents) - Colloid carcinoma
Orinda (Kaiser Permanente Hospital) - Mucinous carcinoma cribriform variant
San Diego (Naval Medical Center) - Infiltrating ductal carcinoma with mucinous features
Alabama (Cunningham Pathology) - Mucinous carcinoma
Florida, Orlando - Mucinous carcinoma
Georgia, Atlanta - Mucinous/colloid carcinoma (type B)
Illinois (Heartland Regional Medical Center) - Mucinous carcinoma
Kansas (Coffeyville Regional Medical Center) - Mucinous carcinoma with prominent epithelial component
Kansas (Peterson Laboratory Services) - Mucinous carcinoma, type B
Maryland (University of Maryland) - Invasive mucinous carcinoma with neuroendocrine features
Michigan (Henry Ford Hospital Residents) - Mucinous carcinoma, cellular variant
New York (Buffalo General Hospital Residents) - Mucoepidermoid carcinoma
New York (SUNY Downstate Medical Center Residents) - Mucinous carcinoma
Ohio, Columbus - Mucinous adenocarcinoma (colloid carcinoma)
Oregon (Oregon Health Sciences University Residents) - Invasive mucinous carcinoma, hypercellular variant
Pennsylvania (Drexel University College of Medicine Residents) - Invasive ductal carcinoma with mucinous features
Pennsylvania (Wilkes-Barre General Hospital - Invasive mucin-producing ductal carcinoma with cribriform and apocrine features
Puerto Rico (University of Puerto Rico) - Invasive mucinous carcinoma, grade 2, trabecular variant
South Carolina (Lexington Medical Center) - Invasive ductal carcinoma with mucinous features
Tennessee, Knoxville - Invasive ductal carcinoma with mucinous features
Texas, Crystal Beach - Ductal carcinoma mucinous, infiltrating
Texas, Lubbock - Mucinous carcinoma
Wisconsin, Madison - Infiltrating ductal carcinoma with mucinous differentiation
Wisconsin (Medical Assessment and Consultation, S.C.) - Mucin secreting adenocarcinoma
Wisconsin (The Medical College of Wisconsin) - Invasive ductal carcinoma with mcinous features (rule out neuroendocrine features)
Australia (St. Vincent's Hospital, Sydney) - Invasive ductal carcinoma with mucinous features
Canada (Pasqua Hospital) - Mucinous carcinoma
Canada (University of Sherbrooke) - Mucinous carcinoma, breast
Ireland (Connelly Hospital) - Mucinous carcinoma
Ireland (University Hospital, Galway) - Mucinous adenocarcinoma
Japan (Asahi General Hospital) - Mucinous carcinoma, type B (2)
United Kingdom (Royal Berkshire Hospital) - Mucinous carcinoma

Case 9 - Diagnosis:

Mucinous (colloid) carcinoma, *hypercellular variant*, breast
T-04000, M-84803

Consultation: Dr. Tavassoli: "Mucinous (colloid) carcinoma, hypercellular variant."

Case 9 - References:

See Reference for Case #8

Costa Mesa (College Hospital) - Epithelioid sarcoma
Glendale - Carcinoma
Loma Linda - Infiltrating duct carcinoma with squamous metaplasia
North Carolina (Wake Forest University School of Medicine Residents) - Metaplastic carcinoma
Orange (UCI Medical Center Residents) - Metaplastic carcinoma
Orinda (Kaiser Permanente Hospital) - Spindle cell carcinoma
San Diego (Naval Medical Center) - Metaplastic carcinoma
Alabama (Cunningham Pathology) - Myofibroblastoma
Florida, Orlando - Metaplastic carcinoma
Georgia, Atlanta - Metaplastic carcinoma with skeletal muscle differentiation
Illinois (Heartland Regional Medical Center) - Metaplastic carcinoma, squamous type
Kansas (Coffeyville Regional Medical Center) - Metaplastic carcinoma
Kansas (Peterson Laboratory Services) - Metaplastic carcinoma
Maryland (University of Maryland) - Metaplastic mammary carcinoma (spindle cell type)
Michigan (Henry Ford Hospital Residents) - Metaplastic spindle cell carcinoma
New York (Buffalo General Hospital Residents) - Myoepithelioma
New York (SUNY Downstate Medical Center Residents) - Metaplastic carcinoma
Ohio, Columbus - Metaplastic carcinoma
Oregon (Oregon Health Sciences University Residents) - Metaplastic carcinoma
Pennsylvania (Drexel University College of Medicine Residents) - Metaplastic carcinoma
Pennsylvania (Wilkes-Barre General Hospital - Spindle cell metaplastic carcinoma
Puerto Rico (University of Puerto Rico) - Metaplastic carcinoma, spindle cell and squamous cell type
South Carolina (Lexington Medical Center) - Metaplastic carcinoma
Tennessee, Knoxville - Metaplastic carcinoma
Texas, Crystal Beach - Metaplastic carcinoma
Texas, Lubbock - Metaplastic carcinoma
Wisconsin, Madison - Metaplastic carcinoma
Wisconsin (Medical Assessment and Consultation, S.C.) - Metaplastic carcinoma (with squamous component)
Wisconsin (The Medical College of Wisconsin) - Metaplastic carcinoma
Australia (St. Vincent's Hospital, Sydney) - Metaplastic carcinoma
Canada (Pasqua Hospital) - Metaplastic carcinoma
Canada (University of Sherbrooke) - Myoepithelioma, breast
Ireland (Connelly Hospital) - Angiosarcoma
Ireland (University Hospital, Galway) - Metaplastic carcinoma
Japan (Asahi General Hospital) - Malignant myoepithelioma (1); Invasive ductal carcinoma (1)
United Kingdom (Royal Berkshire Hospital) - Metaplastic carcinoma

Case 10 - Diagnosis:

Metaplastic carcinoma, breast
T-04000, M-80103

Case 10 - References:

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