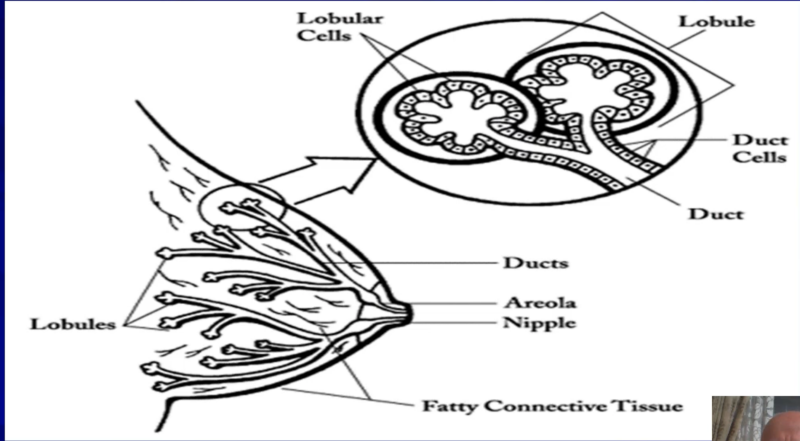


# Benign Breast conditions

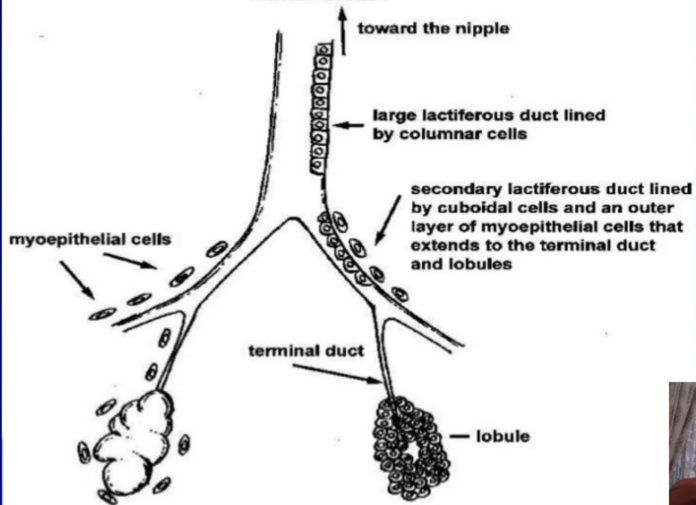
Jamal Masad Melhem

Professor of Surgical oncology





Schematic representation of the female breast

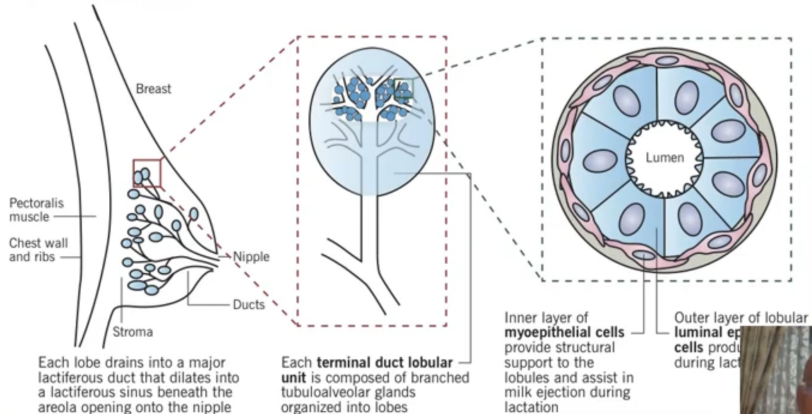


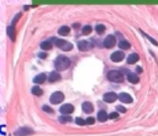
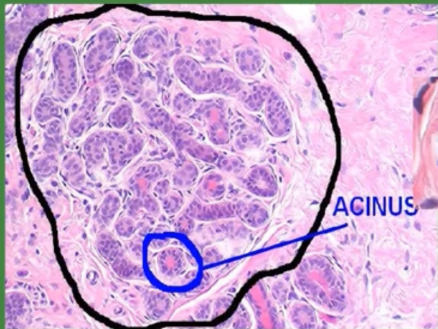
# Breast anatomy and histology

Eric Wong

Clin Obstet Gynecol. 2011 Mar;54(1):91-5.

The breast is composed of glandular and stromal tissue. Glandular tissue includes the ducts and lobules. **Stroma** comprises area between lobes.



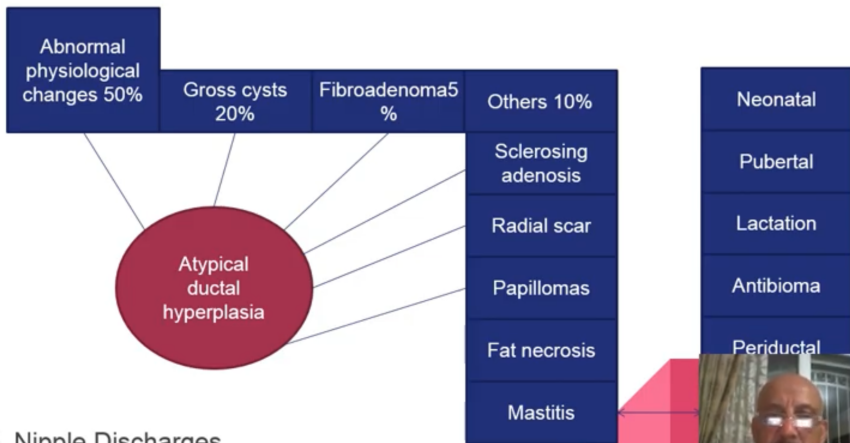


ACINUS

[www.freelivedoctor.com](http://www.freelivedoctor.com)



- 1. Benign Masses



- 2. Nipple Discharges



## Classification Based On Histologic Types

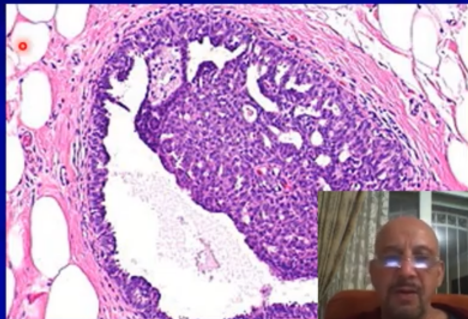
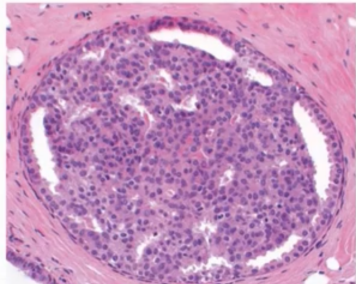
- **Non Proliferative Lesion**
  - Simple Cyst
  - Complex cyst
- **Proliferative Lesions – Without Atypia**
  - Ductal hyperplasia
  - Fibroadenoma
  - Intraductal papilloma
  - Sclerosing Adenoma
  - Radial Scars
- **Atypical Hyperplasia**
  - Atypical ductal hyperplasia
  - Atypical lobular hyperplasia

*Schnitt, S.J. Benign breast disease and breast cancer risk: morphology and beyond. Am J surg pathology 2003;27*



# Usual hyperplasia

**Classic Epithelial hyperplasia.** The lumen is filled with a heterogeneous population of cells of different morphologies. Irregular slit-like fenestrations are prominent at the periphery.





# Atypical hyperplasia

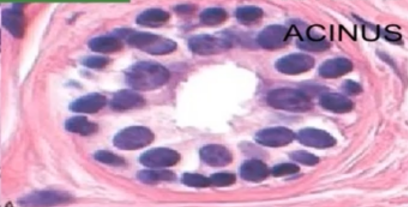
- Atypical hyperplasia (AH) includes both atypical ductal hyperplasia (ADH) and atypical lobular hyperplasia (ALH).
- AH is a pathologic diagnosis.
- These lesions have some, but not all, of the features of DCIS or LCIS.



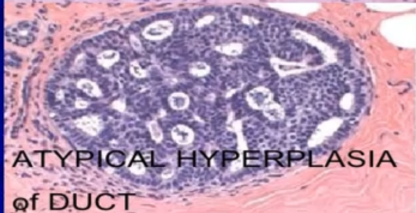
NORMAL  
DUCT



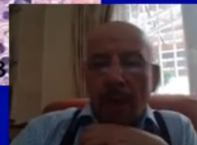
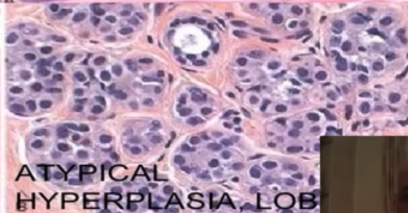
NORMAL  
ACINUS



ATYPICAL HYPERPLASIA  
of DUCT



ATYPICAL  
HYPERPLASIA LOB



# FIBROCYSTIC DISEASE

Breast condition consisting of fibrous and cystic changes in the breast.

Symptoms : Breast pain or tenderness that varies with the menstrual cycle.

Masses are often multiple and bilateral.... Rapid fluctuation in mass size is common.

Exaggerated response from hormones and growth factor

Tribble assessment ???



What is the treatment for symptomatic fibrocystic disease?

- Stop caffeine, low-fat diet or decreasing dietary fat intake , Vitamin E, evening primrose oil.
- Danazol , Tamoxifen.



## Gross cysts

- A breast cyst is a fluid-filled round or ovoid mass derived from the terminal duct lobular unit (TDLU). because of distension and obstruction of the efferent duct
- Breast cysts may fluctuate in size, number, and magnitude of symptoms.



# Clinical features of breast cysts

- A breast cyst can present as a painful or painless, often solitary, mass.
- Acute enlargement of cysts may cause severe, localized pain of sudden onset.
- Physical findings are tense, tender mass, slightly mobile , but not all cysts have a sharp distinct border.
- Needle aspiration

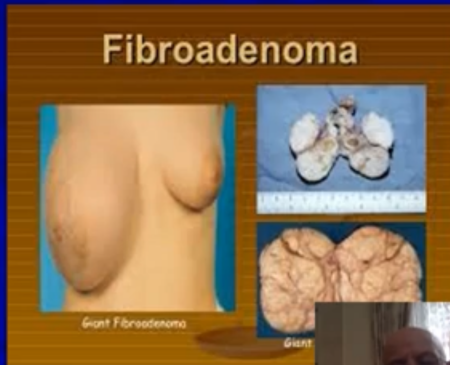


# FIBROADENOMA

- Benign tumor of the breast"
- Most common breast tumor in women <30 years
- No increased risk of carcinoma
- **clinical presentation:** Solid, mostly single, mobile, well-circumscribed round breast mass
- Estrogen sensitive ;may be painful during menstrual cycle and grows during pregnancy
- If a biopsy-proven fibroadenoma is asymptomatic, then it can be left in place.



- Giant fibroadenomas
  - juvenile fibroadenomas
- ( surgical challenge)





## Complex fibroadenomas

Complex fibroadenoma is a sub type of fibroadenoma containing epithelial calcifications. papillary apocrine metaplasia. sclerosing adenosis and. cysts larger than 3 mm.

Minimal risk of malignancy.



## Phyllodes Tumor

- Proliferation of connective tissue with ductal elements and stroma
- Firm, lobulated
- 2 to 40 cm in size
- 10% malignant
- Treatment
  - Wide excision



Figure 1 – Protruding and hardened palpating the upper quadrants of the right breast



## Sclerosing adenosis

- . It can present as a **mass mimic cancer** or **suspicious finding** on mammogram.
- No treatment is needed for sclerosing adenosis.
- Diagnosed by core biopsy
- The risk of subsequent breast cancer in this population is small and chemoprevention is not indicated



## Fat necrosis

- Result of breast trauma or surgical intervention and anticoagulation.
- Hard lump with some irregularities & skin tethering confused with malignancy
- Diagnosis : biopsy and radiology
- Excision is not necessary and there is no increased risk of breast cancer.
- Usually resolve with time.



# Galactocele

- Galactoceles (milk retention cysts) are cystic collections of fluid, usually caused by an obstructed milk duct.
- presents as soft cystic masses on physical exam.
- At mammography, galactoceles may appear as an indeterminate mass, unless the classic fat-fluid level is seen.
- Ultrasound may show a complex mass.
- Diagnosis : clinical history and aspiration
- Excision is not necessary and there is no increased risk of subsequent breast cancer.



# Hamartoma

- Hamartomas are benign lesions, also known as fibroadenolipoma, lipofibroadenoma, or adenolipoma.
- Hamartomas have varying amounts of glandular, adipose, and fibrous tissue.
- They present as **discrete, encapsulated, painless masses**, or are found incidentally on screening mammography.
- The diagnosis can be difficult to make with limited tissue, as hamartomas do not have specific diagnostic features.
- Fine needle aspiration and core needle biopsy (CNB) are not sufficient to establish the diagnosis.
- **As coexisting malignancy can occur, excision is recommended.**



# Mammary duct ecatsia

- .
- The duct adjacent to the nipple become dilated & engorged with breast secretion.
- 2ry infection leads to periductal mastitis & abscess ,, fibrosis-nipple retraction.
- Nipple discharge multicolored, often bilateral
- Treatment



# Mastitis





Neonatal mastitis



...

## PUBERTAL MASTITIS



## Lactational mastitis



# Antibioma



## Periductal mastitis





## Granulomatus mastitis

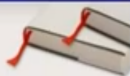


## Granulomatus mastitis





## Gynecomastia



- Smears similar to fibroadenoma
- Sheets of cuboidal ductal cells & fragments of loose connective tissue stroma
- Bipolar, spindly myoepithelial cells & oncocytes
- Fragments of fibrous stroma & adipose tissue



# Breast Pain

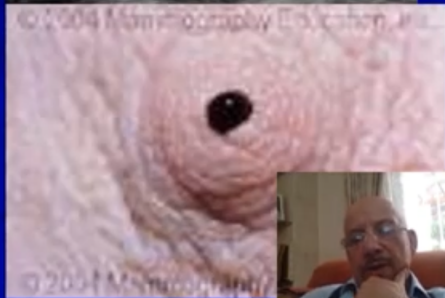
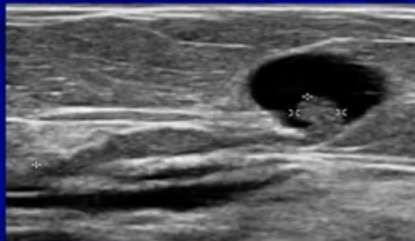
- Cyclical pain – hormonal
  - Dull, diffuse and bilateral
  - Luteal phase
  - Treatment
    - Reassurance
    - Decrease caffeine intake
  
    - NSAIDS
    - Evening primrose oil
    - Vitamins B6, E
    - Danazol
    - Anti prolactin
    - Tamoxifen



- Non-cyclical pain
- Non-breast vs breast
  - breast inflammatory condition
  - Teitz disease, Mondors disease
  - cervical vertebrae
- Treatment: treat the cause

# Nipple Discharge

- Pathologic
  - Unilateral
  - Spontaneous
  - Heme (+)
  - Most common cause intraductal papilloma



# Calcification

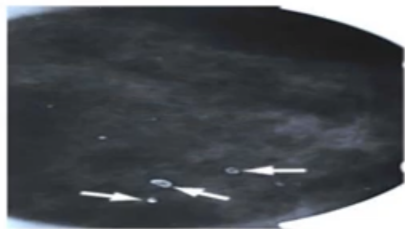
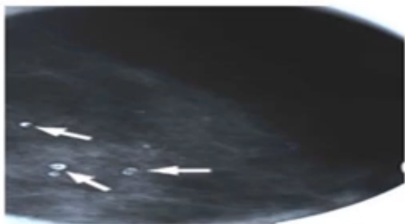
## ■ Macrocalcifications

- Large white dots
- Almost always noncancerous and require no further follow-up.

## ■ Microcalcifications

- Very fine white specks
- Usually noncancerous but can sometimes be a sign of cancer.
- Size, shape and pattern

Noncancerous (benign)  
calcifications



Cancerous (malignant)  
calcifications

