Evaluation and Treatment of Breast Diseases

Jaime D. Lewis, MD
Assistant Professor of Surgery
University of Cincinnati
Objectives

• Provide the guidelines for routine screening mammography.
• Describe the diagnostic workup and management for common breast conditions including pain, nipple discharge, and mass.
• Provide the differential diagnosis of a breast lump based on patient age.
• Describe the options for surgical treatment of breast cancers.
• Describe the rationale for chemotherapy, radiation therapy, and hormonal therapy in the treatment of breast cancer.
History

- Duration
- Change in mass size
  - Stable or growing
  - Fluctuating
- Nipple discharge
  - Uni- versus bilateral
  - Color
  - Spontaneous or elicited
  - One or multiple ducts
- Precipitating factors
  - Change in medication
  - Menstrual cycle
  - Pregnancy
- Constitutional symptoms
  - Weight loss
  - Fever
  - Fatigue
- Past medical/surgical history
- Medications
- Family history
Anatomy
Physical Exam

- Visual inspection
- Palpation
  - Breast
  - Nodal basins
- Nipple discharge
  - Location
  - Character
  - One or multiple ducts
  - Trigger point?
Imaging

• Mammography
  ▫ Patient age
  ▫ Screening versus diagnostic
• Ultrasound
• MRI in select cases
Mammographic Views
Mammographic Views
Case Study #1

• 14 year old adolescent presents with a left breast mass that she first noticed 2 months ago
Fibroadenoma

- Likely due to exaggerated response to estrogen
- Initial period of growth over 6-12 months then stabilize
- Average 2-3 cm, can be quite large
- Often present in late adolescence
  - Can occur 1-2 years prior to menarche
  - Can occur/be identified throughout lifetime
- More common in African Americans
- 10% bilateral
- 25% multiple
Management

- History
- Exam
- Ultrasound
  - Biopsy if atypical features
  - Typical features
    - Repeat ultrasound in 3-6 months
    - Biopsy or excise if growing
    - Excision or percutaneous treatment
    - Excise if >5 cm
- May remain stable, resolve, or grow
Case Study #2

- 38 year old young woman presents with a tender 2 cm right breast mass that appeared “overnight”
- ???
Cyst

- Fluid filled epithelial space
- Often multiple and bilateral
- Ultrasound
- If simple
  - Observation
  - Simple aspiration
- If symptomatic or complex
  - Aspiration or biopsy
  - Excision if fluid bloody or aspiration incomplete
- Percutaneous removal
Case Study #3

- 45 year old woman presents with bilateral breast pain
Mammogram and Ultrasound
Breast Pain

• Cyclical – hormonal
• Fibrocystic breast changes
• Reassurance
• Supportive bra
  ▫ Ensure correct size
  ▫ Try without underwire
  ▫ Sports bra at night
• Oral contraceptives
• NSAIDs
• Unlikely beneficial
  ▫ Vitamin E
  ▫ Evening primrose oil
  ▫ Caffeine avoidance

• Non-cyclical
  ▫ Cysts
  ▫ Fibroadenomas
  ▫ Costochondritis
• NSAIDs
Case Study #4

- 40 year old woman presents with nipple discharge
Nipple Discharge

Induced & multiduct

< 40yr
Follow-up prn

> 40yr
Diag Mammo

Normal

Abnormal

Screening

Normal

Image-guided core

Benign: 2yr DBC follow-up

Complete H & P

Bilateral & Milky

Endocrine Eval & R/O pregnancy

Refer

Abnormal

Imaging +/- biopsy

Benign: 2yr DBC FUP

Normal except Spontaneous persistent unilateral, single duct

Diag Imaging

Normal

Ductogram with Duct Excision

Abnormal

Image-guided core biopsy + ductogram w/ duct excision if separate lesions
Common Causes of Nipple Discharge

- Benign
  - Medications
  - Infection
  - Fibrocystic breast changes
  - Duct ectasia
  - Papillomas
- Malignant
Case Study #5

- 28 year old woman who is currently breastfeeding her 6 month old baby present with a 3 cm tender right breast mass with overlying redness and swelling
Case Study #6

- 39 year old woman presents to you asking about having her first mammogram
Case Study #7

- 73 year old woman presents with a newly diagnosed 1 cm ER/PR+ HER2- invasive ductal carcinoma
  - Surgery?
  - Radiation?
  - System therapy?
Case Study #7

- 58 year old woman presents with sudden onset of left breast erythema and swelling and nipple retraction
- Diagnostic mammogram-ultrasound shows 2 cm ill defined mass with probable ductal extension towards nipple, axillary adenopathy
- Pathology shows ER/PR weakly positive, HER2+ invasive ductal carcinoma
Case Study #9

• 37 year old woman presents with a 2 cm left breast mass, mammogram unremarkable