Rotation Specific Goals and Objectives

Clinical Teaching Unit #3 (CTU #3): Breast Surgery Service – Supplement for CTU #3

Rotation Description

Understand knowledge of the anatomy, physiology and pathophysiology of the breast. As well as to demonstrate the ability to surgically manage diseases of the breast.

Medical Expert/Clinical Decision Maker

Knowledge: Basic Science and Anatomy

Junior and Senior level
1. Describe the anatomy of the breast
2. Explain the hormonal regulation of the breast.
3. Summarize the physiologic changes associated with pregnancy (i.e. lactations), including breast specific problems specific to pregnancy (i.e. mastitis)

Knowledge: General Clinical

Junior Level
1. Take an appropriate history to evaluate breast patients to include:
   a. Pertinent risk factors
   b. Previous history of breast problems
   c. Current breast symptoms
2. Demonstrate an increasing level of sill in the physical examination of the breast, including recognition of the range of variation in the normal breast.
3. Explain the steps in the clinical decision tree that are involved in the work up of a breast mass.
4. Discuss the role of breast imaging (general indications, uses and limitations), needle aspiration, fine-needle biopsy, core biopsy, surgical biopsy +/- needle localization.

Senior Level
1. Independently evaluate a new breast patient through history and physical examination, ordering appropriate and cost-effective tests such as mammograms, ultrasound, MRI, fine-needle aspiration (FNA) and core biopsy.
2. Formulate a diagnostic work up and treatment plan for common breast problems, both benign and malignant.
3. Management of breast surgery-related complications (i.e. hematoma, infection, seroma).

Knowledge: Specific Clinical Problems

Junior Level
1. Summarize the incidence, epidemiology and risk factors associated with breast cancer.
2. Distinguish between these common entities in the differential diagnosis of breast masses
   a. Fibroadenomas
   b. Fibrocystic disease
   c. Cysts
   d. Fat Necrosis
   e. Abscesses
   f. Cancer
3. Discuss the principles for the surgical treatment of breast cancer with respect to
   a. Lumpectomy
   b. Mastectomy
   c. Sentinel lymph node biopsy
   d. Axillary lymph node dissection
4. Outline the genetic and environmental factors associated with carcinoma of the breast.
5. Describe the following pathological types of breast cancer, including the biology, natural
   history and prognosis of each:
   a. Invasive ductal carcinoma
   b. Ductal carcinoma in situ
   c. Invasive lobular carcinoma
   d. Lobular carcinoma in situ
   e. Other epithelial tumour types
   f. Non-epithelial breast tumors (i.e. Phyllodes tumors)
6. Describe the presentation, natural history, pathology and treatment of the following
   benign breast diseases
   a. Lactational breast abscess/mastitis
   b. Chronic recurring subareolar abscess
   c. Papillary lesions
   d. Atypical ductal/lobular hyperplasia
   e. Fibroadenoma
   f. Nipple discharge
   g. Mastalgia
   h. Gynecomastia
   i. Cysts
7. Interpret signs suspicious for malignancy of mammogram such as masses, asymmetries
   and microcalcifications.
8. Outline the diagnostic work up and the differential diagnosis of various forms of nipple
   discharge.
9. Demonstrate the ability to satisfactorily orient the surgical specimen for pathologic
   examination
10. Explain the use of tumor, nodes and metastases (TNM) staging in the staging of breast
    cancer.

**Senior Level**

1. Describe the characteristics, diagnosis and therapy of less common lesions of the breast
   such as:
a. Inflammatory carcinoma  
b. Paget’s Disease  
c. Lactiferous duct fistula  
d. Mondor’s disease  
e. Phyllloides Tumours  
f. Bilateral breast carcinoma  
g. Male breast carcinoma

2. Summarize the role of neoadjuvant chemotherapy/hormonal therapy, adjuvant chemotherapy/hormonal therapy and adjuvant radiation therapy for the treatment of primary breast carcinoma.

3. Outline the importance of estrogen and progesterone receptors, Her2 and other histological and immunohistochemical makers in the prognosis and treatment of breast cancer.

4. Understand commonly encountered familial breast cancer syndromes and genetic alterations associated with these.

5. Describe the basic concepts underlying the treatment of breast cancer, including the role of:
   a. Surgery  
   b. Chemotherapy  
   c. Radiation therapy  
   d. Hormonal therapy  
   e. Targeted therapies

6. Outline appropriate management of breast cancer diagnosed in pregnant and non-pregnant patients

7. Formulate plans for basic patient care, including pre-, intra-, and post-operative care.

8. Summarize the major considerations for post-mastectomy breast reconstruction.

9. Identify and analyze the data addressing controversial areas of breast disease such as:
   a. Current concepts in the management of cancer (i.e. management of the axilla)  
   b. Role of various adjuvant therapies and their timing

Knowledge: Technical

Junior Level:

1. Perform simple procedures such as:
   a. Fine-needle aspiration of breast cyst  
   b. Excisional breast biopsy (+/- needle localization)

2. Assist in operative procedures such as lumpectomy (+/- needle localization), mastectomy (simple, skin sparing, nipple sparing), sentinel node biopsy, axillary lymph node dissection.

3. Explain the mechanics and potential value of the stereotactic biopsy

Senior Level:

1. Perform, under direct supervision, more advanced procedures on the breast such as:
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Rotation Specific Goals and Objectives

a. Mastectomy (simple)  
b. Lumpectomy (+/- needle localization)  
c. Excisional biopsy (+/- needle localization)  
d. Sentinel Lymph node biopsy

2. Acquire basic experience with breast reconstruction, cosmetic surgical techniques and advanced mastectomies (skin sparing, nipple sparing), and axillary lymph node dissection.

Communicator

1. Develop therapeutic relationship with patients with breast problems and their families.  
2. Discuss and explain options to the newly-diagnosed breast cancer patient and their families.  
3. Be able to obtain informed consent for surgical interventions related to diseases of the breast.

Collaborator

Junior Level:  
1. Understand the rationale for using a team approach to facilitate the complex discussions and explanations of options for the newly-diagnosed breast cancer patient prior to definitive treatment (e.g., team of oncologists, radiologist, breast surgeon, plastic surgeon).

Senior Level:  
1. Consult and interact with multidisciplinary Oncology Team in arriving at therapeutic options to newly diagnosed breast cancer patient.

Leader

1. Be able to manage diagnosis and treatments of breast disease in a sound manner consider the multifaceted decision making process in complex situations. Monitor time to diagnosis and time to treatment for your patients.

Health Advocate

1. Understand the benefit of screening mammograms and know an appropriate frequency

Scholar

1. Participate in academic rounds and read around cases

Professional

1. Behave honestly and in a professional manner
Selected Bibliography:


