### General description:

The FAU surgical residents will rotate in the Department of Surgery at Boca Raton Regional Hospital and the Lynn Women’s Health and Wellness Center, during their intern year. The duration of this rotation is one month.

The residents will be a fully integrated member of the Breast Surgery team, under the supervision of the Breast Surgery, Plastic Surgery, Medical/Radiation Oncology, and Radiology attendings providing care to Breast Surgery patients. Oversight over the rotation lays with the Director of the Division of Breast Surgery at Boca Raton Regional Hospital and the Program Director of the Program in General Surgery at FAU.

The surgical residents will participate in all care rendered to inpatient and outpatient Breast Surgery patients, including: admission, diagnostic work-up, operations, post-operative care and discharge.

The surgical residents will attend the following educational activities:

- **Surgery Core/specialty curriculum and Resident Lectures** - 2 hours/week
- **Surgery M&M** - 1 hour/week
- **Breast Surgery Faculty Office Hours** – 1 four- to six-hour block/week
  - [Tuesday, Thursday, Dr. Coletta; Monday, Wednesday, Friday, Dr. Becker]
- **Tumor Board** – 1 hour/week [Tuesday 7:30AM]
- **Multi-Disciplinary Breast Conference** – 1 hour/week [Tuesday 8:00 AM]
- **Radiology Conference** – 2 hours/week

In addition, the residents (all levels) will receive the Breast Surgery-related lectures during the subspecialty core curriculum.

The residents will participate in operations related to breast disease, including but not limited to biopsy, simple mastectomy, total mastectomy, modified radical mastectomy, axillary node dissection, sentinel node biopsy, reconstructive procedures, as appropriate with their level of training.

The residents will spend time learning breast diagnostics, including Ultrasonography, Mammography, Computed Tomography, Magnetic Resonance Imaging, including image guided biopsy, under supervision of the Breast Radiographer [at least one day out of the week]

### Competencies:

#### Goals and Objectives:

**Patient Care:**

**Goals:**

During this rotation, the resident should learn and practice to:

- Demonstrate caring and **respectful behaviors** when interacting with patients and their families; demonstrate **sensitivity** to gender, age, ethnicity, religion, value systems and other potential differences of patients and their families; practice according to the
clinical standards of Boca Regional Hospital and the participating program hospitals.

- Gather patient and case specific essential, comprehensive multi-source and accurate information about their patients for initial or peri-operative workup and patient follow up in the inpatient and outpatient setting

- Using all available resources, under the guidance of the Breast Surgery/Plastic Surgery attending and experienced Breast Surgery allied healthcare providers, make informed decisions about diagnostic and therapeutic interventions based on patient information, up-to-date scientific evidence and clinical judgment; evaluate and implement priorities in patient care and incorporate preventive measures

- Under the guidance of the Breast Surgery/Plastic Surgery attending and other designated Breast Center related expert personnel, develop and carry out patient management plans

- Under the guidance of the Breast Surgery/Plastic Surgery attending and other designated Breast Center related expert personnel, monitor closely the patient’s clinical progress, review and react to variances in patient progress or response to therapeutic interventions; communicate the details and changes of patient care, progress and complications to the Breast Surgery/Plastic Surgery attending and/or appropriate allied provider(s) in a timely manner

- Under close and direct supervision of the Breast Surgery/Plastic Surgery attending and other designated Breast Center related expert personnel, counsel and educate patients and their families on the state of the patient’s disease, necessary diagnostic tests, operative procedures medical management

- Use information technology (hospital computer system) to support patient care decisions and patient education (electronic patient record, electronic radiology studies, online educational resources, including literature research)

- Work closely with other healthcare professionals, including those from other disciplines (Radiology, Medical- and Radiation Oncology, Geneticists, Case managers, Infusion providers, mid-level providers, nurses, Surgery office staff, etc.), to provide patient-focused and optimum outcome driven care

- Ensure that the needs of the patient and team supersede individual preferences when managing patient care; incorporate evidence-based medicine into patient care whenever possible; comply with changes in clinical practice and standards given by the Breast Surgery or other responsible attending

**Objectives:**

During the rotation, the resident should:

- Under one-on-one supervision by the Breast Surgery/Plastic Surgery attending, and/or Breast Radiologist, perform competently and/or assist in procedures (both in the
inpatient and outpatient setting) **considered essential for the area of practice:**

**Perform under supervision:**

a. Breast Biopsy  
   a) FNA/core, palpable lesion  
   b) FNA/core, non-palpable lesion, ultrasound guidance  
   c) FNA/core, mammographic guidance  
   d) excisional with and without prior localization  

b. Cyst aspiration, with or without ultrasound guidance  

c. Sentinel node biopsy  

d. Simple mastectomy with and without axillary biopsy or dissection  

e. Total Mastectomy, Modified Radical Mastectomy  

**Assist:**

a Breast reconstruction  
   a) TRAM flap  
   b) DEEP flap  
   c) Implant/Prosthesis  

b. Plastic surgery procedures  
   a) reduction Mammaplasty  
   b) correction of ptosis and other conditions

- Under supervision by the Breast Surgery/Plastic Surgery attending and other designated Breast Center related expert personnel, participate in the **pre- and post-operative surgical management** of patients before and after Breast Surgery procedures; participate in daily morning and afternoon patient rounds on the Breast Surgery service at Northwest.

- Under supervision by the Breast Surgery/Plastic Surgery attendings and other designated Breast Center related expert personnel, **manage post-operative surgical complications**, including bleeding, wound infection, pain, lymphedema, nerve damage, etc.

- Attend **Breast Surgery clinics/faculty office hours** as outlined above and participate in the evaluation of patients in the office setting.

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**Medical Knowledge:**

**Goals:**

Residents must demonstrate knowledge about established and evolving biomedical, clinical and cognate (e.g., epidemiological and social-behavioral) sciences and the application of this knowledge to patient care.

**Objectives:**

At the end of the Breast Surgery rotation, the resident should be able to:

- Demonstrate knowledge of the anatomy, physiology and pathophysiology of breast disease and be able to prescribe treatment and provide appropriate care for patients.
undergoing breast surgery.

- Describe and demonstrate a **working knowledge of the embryologic development of the breast**, including
  a. Tissue origins
  b. Hormonal influences in breast development, Tanner stages
  c. Common developmental abnormalities, including accessory breast tissue/nipple areolar complexes, breast hypoplasia/amastia and association with developmental syndromes [i.e. Poland]

- Describe and demonstrate a **working knowledge of the anatomy of the breast, chest wall and axilla**, including:
  a. Lobular architecture, support structures, glandular structures, nipple areolar complex
  b. Lymphatic drainage, nodal basins and stations
  c. Vascular supply of the breast, chest wall and axilla
  d. Sensory innervation of the breast, important neural structures of the axilla and chest wall and their relation to breast tissue and nodal stations
  e. Musculature of the chest wall and relation to breast tissue, neural structures and nodal stations
  f. Specific anatomic considerations of the male breast (arteries) with common variations/abnormalities

- Describe and demonstrate **working knowledge of breast physiology**, including:
  a. Hormonal influences on the female breast, during menstruation, pregnancy, lactation, pre- and post-menopausal changes
  b. Hormonal influences on the male breast and common medical conditions that contribute [i.e. liver disease, adrenals disease, pituitary disease, morbid obesity]
  c. Common medications that influence breast function

- Describe indication, limitations and possible complications related to **breast imaging and localization procedures**, including:
  a. **Mammography**: standard technique and special views, limitations in the young/old/dense/large breast, characteristics of appearance of normal breast tissue and common abnormalities [i.e. calcifications, solid/cystic lesions, architectural distortion, etc.], BIRADS grading; indications for the study, recommendations for use in routine screening and relation to clinical breast cancer risk; use in biopsy and pre-surgical localization; radiation exposure
  b. **Breast ultrasonography**: standard technique limitations in the young/old/dense/large breast, characteristics of appearance of normal breast tissue and common abnormalities [i.e. hyper/hypo-echoic lesions, solid/cystic lesions, architectural distortion, etc.], BIRADS grading; indications for the study, recommendations for use in routine screening and relation to clinical breast cancer risk; use in biopsy and cyst aspiration
c. **Computed Tomography/PET scan**: standard technique, limitations in the young/old/dense/large breast, characteristics of appearance of normal breast tissue and common abnormalities [i.e. calcifications, solid/cystic lesions, architectural distortion, metastatic disease, etc.], indications for the study, recommendations for use in screening for metastatic disease; radiation exposure

d. **Magnetic Resonance Imaging**:  
e. **Ductography**: standard technique, limitations, indications for the study  
f. **Other**

- Discuss and perform the **steps of a comprehensive breast examination**
  - Inspection, palpation, sitting lying down, arms up/down
  - Palpation of supraclavicular, axillary, chest wall nodal basins

- Define and perform a **comprehensive breast cancer history**:
  - Personal history: menarche, menopause, contraceptives, number of children, age at first pregnancy, other risk factors
  - Family history: first/second degree relatives, age relation for occurrence of breast cancer
  - Indications for genetic counseling

- Describe the **algorithm for evaluation of a new (non-)palpable breast mass and nipple discharge**
  - Differentiate solid, cystic or mixed lesions
  - Relate mammographic, sonographic and/or other imaging findings
  - Relate the patients clinical cancer risk
  - Role of aspiration/cytology, FNA, core or excisional biopsy

- Discuss the specifics [pathophysiology, epidemiology/risk factors, clinical evaluation and therapeutic options] for **common benign breast conditions**
  - Fibroadenoma, fibrocystic disease of the breast, sclerosing adenosis
  - Gynecomastia, Galactocele
  - Mastodynia, Fat necrosis of the breast
  - Differential breast size/conformation, amastia/hypoplasia, polythelia, and other common developmental diseases [see above]
  - Mastitis, periductal mastitis [mammary ductal ectasis], breast abscess
  - Mondor disease.

- Discuss the specifics [pathophysiology, epidemiology/risk factors, clinical evaluation and therapeutic options] for **common malignant breast conditions**, including common genetic features and distinguishing features [i.e. Her-2-neu, ER/PR receptor status, etc.] and their implication for therapy and prognosis
  - Breast cancer sporadic/hereditary, inflammatory, lobular/ductal, male/female,
- Carcinoma in situ, breast cancer during pregnancy
- Paget’s Disease of the Nipple, Phylloides Tumor

- Describe and assess the operative indications, risk and expected outcomes associated with several Breast surgical procedures, including:
  - Breast Biopsy w. and w/o. localization/image guidance [core, open]
  - Cyst aspiration w. ultrasound guidance
  - Partial and Simple Mastectomy, incl. nipple sparing/minimally invasive
  - Axillary Sentinel lymph node biopsy and lymphadenectomy
  - Modified radical and radical mastectomy
  - Breast reconstructive procedures [immediate/delayed, one-stage/two-stage]
    - TRAM, DIEP, Latissimus/Gluteal flap/TUG, Implant, other

- Discuss the complications of Breast surgery and methods used to reduce their incidence, including: wound infection/dehiscence, flap necrosis, seroma, numbness, lymphedema of the breast and/or extremity, chronic pain, breast cellulitis, venous thromboembolism

- Review the risk of cancer recurrence after operative/combination ablation therapy and reconstruction; discuss recommended follow-up intervals and diagnostics;

- Describe the most commonly used chemotherapeutic agents and combination regimen in the management of breast malignancy, and their relation to tumor biology and age/functional status of the patient

**Objectives – general:**

- Complete the reading assignment (see literature list)

- Attend all (≥ 85%) conferences, M&M conferences, Grand Rounds/other educational activities of the Division of Breast Surgery during the rotation.

- Take a post-rotation self-assessment test with at least 75% correct answers [if offered]

**Practice-based Learning and Improvement:**

**Goals and Objectives:**

Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:

- **Self-assessment:** Analyze practice experience during the rotation, as well as own performance, based on interaction with Breast Surgery / Plastic Surgery attending(s) and other key Breast Surgery staff; accept and use constructive criticism to improve performance in the six core competencies.

- **Medical knowledge:** Self-directed and under mentorship of Breast Surgery / Plastic Surgery attending staff and experienced mid-level provider(s), locate, appraise and
assimilate evidence from scientific studies related to their patients’ health problems; Use evidence based medicine approach to patient care whenever possible; apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness; use information technology to manage information, access online medical information and support their own education; Facilitate the learning of students and other healthcare professionals on the Breast Surgery service by sharing pre-existing and newly acquired knowledge (general and case-based) on rounds and during formal educational activities. Residents are encouraged to ask/question the Breast Surgery attending staff and/or other Breast Surgery related expert providers for clarification of unclear concepts/practices at any time.

- Participate in the **peri-operative management of Breast Surgery patients** in the inpatient and outpatient setting as outlined in the patient care competency; during the rotation, the resident should become familiar/proficient with:
  
  a. Fundamentals of focused Breast/female endocrine history and exam; routine diagnostic tests and procedures
  
  b. Common breast diseases and fundamental therapeutic options (operative and non-operative)
  
  c. Common breast surgery [ablative, reconstructive] complications and management thereof

- Perform/participate in **Breast Surgery service related operations/procedures** as outlined in the patient care competency; during the rotation the resident should become familiar with:
  
  a. Common diagnostic/ablative procedures: breast biopsy, mastectomy [all types], lymph node biopsy and lymphadenectomy, implant and tissue flap reconstruction
  
  b. Breast diagnostics: Mammography, incl. needle localization; breast ultrasonography, incl. cyst aspiration and core biopsy

### Interpersonal and Communication Skills:

**Goals and Objectives:**
Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patient’s families and professional associates. Residents are expected to:

- Develop interpersonal skills necessary to **communicate effectively** with patients, patient families, nursing staff, mid-level healthcare providers, ancillary staff, medical students, fellow residents and attending staff in the complex multi-specialty environment that constitutes Breast Surgery

- Contribute to **creating an atmosphere of collegiality and mutual respect** with all providers involved in the care of patients
| **Professionalism:** | **Goals and Objectives:**
Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles and sensitivity to a diverse patient population. Residents are expected to:
| - Demonstrate **adherence to institutional and departmental standards and policies**
- Demonstrate **respect, compassion, integrity and ethical behavior** consistent with the **values of the department and institution**; develop and sustain sensitivity toward differences of age, gender, culture, religion, ethnicity or other diversities in both co-workers and patients
- Demonstrate ability to appropriately take on, **share and delegate responsibilities** with regard to patient care; balance own rights and privileges appropriately with responsibilities and accountability resulting from being a member of a team dedicated to patient care
- Demonstrate **commitment to excellence and on-going professional development**
- Under attending and other Breast Surgery / Plastic Surgery staff guidance, develop skill to **resolve potential problems and conflicts that occur in a complex corporate environment** using the appropriate channels and methods of communication to maximize patient care and surgical service performance
- Evaluate and formulate a response to **ethical questions, Including**
  a. … |

| **Systems-based Practice:** | **Goals and Objectives:**
Residents must demonstrate an awareness of and responsiveness to the larger context and system of healthcare and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:
| - Understand how choices in patient care and other professional practices affect other healthcare professionals, the healthcare organization and the larger society and how these elements of the system affect their own practice
  a. Average cost of Breast surgery vs. interventional procedures/medical management in the long-term; cost of lives saved/years of life gained in patients with malignant breast disease |
b. The relevance and components of clinical pathways and how to deal with deviation

- Practice cost-effective health care and resource allocation that does not compromise quality of care
- Know how to partner with healthcare managers (Breast Surgery coordinator, social work, case management, PT/OT and Rehabilitation medicine, etc) and other health care providers (PMD, specialty providers in and out of the hospital) to assess, coordinate and improve healthcare for the individual patient and cohorts of patients

Appendix: S.C.O.R.E. Curriculum

### Surgical Council on Resident Education

The SCORE® Curriculum Outline for General Surgery is a list of topics to be covered in a five year general surgery residency program. Graduating residents are expected to be competent in six areas: patient care; medical knowledge; professionalism; interpersonal and communication skills; practice-based learning; and systems-based practice.

The SCORE Portal (www.surgicalcore.org) has been created to provide educational content and assessment in support of the curriculum to general surgery residency programs. Learning “modules” are available on the portal for nearly all of the topics listed in this booklet.

### Patient Care Classification System

The patient care curriculum topics are organized into 28 organ-based categories. Within each category, the topics are further separated into Diseases/Conditions and Operations/Procedures. With this edition, the topics are then stratified into two levels using the same classifications:

- **CORE** – Diseases and procedures encountered in general surgery for which a graduate of training will possess significant knowledge and be able to provide comprehensive care, including procedural competency.

- **ADVANCED** – Diseases and procedures that are not consistently part of general surgery practice for which a graduate of training should have sufficient knowledge to make a diagnosis and provide initial management. In some instances, graduates will have sufficient knowledge and experience to provide comprehensive care.

### Anesthesia Diseases/Conditions

<table>
<thead>
<tr>
<th>Core</th>
<th>Advanced</th>
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<tbody>
<tr>
<td>• Atypical Ductal Hyperplasia &amp; Carcinoma In Situ</td>
<td>• Breast Cancer - Phyllodes Tumor</td>
</tr>
<tr>
<td>• Atypical Lobular Hyperplasia &amp; Carcinoma In Situ</td>
<td>• Postmastectomy Reconstruction Options</td>
</tr>
<tr>
<td>• Benign Disease - Fat Necrosis, Fibroadenoma, Fibrocystic Breast Changes, Galactocele, Gynecomastia, Intraductal Papilloma, Radial Scar,</td>
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<tr>
<td>• Benign Inflammatory Disease - Mastitis &amp; Abscess, Mondor Disease</td>
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<tr>
<td>• Breast Cancer – Hereditary, Inflammatory, Invasive Carcinoma (Ductal, Lobular, All Variants), Male, Paget’s Disease of the Nipple</td>
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<tr>
<td>• Breast Cancer During Pregnancy &amp; Lactation</td>
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<td>• Breast Mass</td>
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<td>• Breast Pain</td>
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<td>• Mammographic Abnormalities</td>
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<td>• Nipple Discharge</td>
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### Operations/Procedures

<table>
<thead>
<tr>
<th>Core</th>
<th>Advanced</th>
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<tbody>
<tr>
<td>• Axillary Sentinel Lymph Node Biopsy and Lymphadenectomy</td>
<td>• Breast Biopsy - Image-Guided</td>
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<tr>
<td>• Breast Biopsy with or without Needle Localization</td>
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<tr>
<td>• Breast Cyst - Aspiration</td>
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<tr>
<td>• Duct Excision</td>
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<td>• Mastectomy - Partial</td>
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<tr>
<td>• Mastectomy - Simple, Modified Radical, and Radical</td>
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Advanced

- Breast Biopsy - Image-Guided