Classification System

Diseases/Conditions

**BROAD** – A graduate of the Breast Oncology training program should be able to care for all aspects of disease and/or provide comprehensive management. When referring to a discipline of training (e.g. research or community outreach), the graduate should be able to carry out the endeavor from its conception through completion.

**FOCUSED** – A graduate of the Breast Oncology training program should be able to make the diagnosis and provide initial management, but will not be expected to be able to provide comprehensive management. For disciplines of training, the graduate should be able to implement and participate in the activity, but would not be expected to complete it on their own.

Operations/Procedures

**ESSENTIAL-COMMON**– Frequently performed operations, procedures, or endeavors for a breast surgeon; specific procedure competency is required by end of training and should be attainable primarily by case volume or active participation in the activity/endeavor.

**ESSENTIAL-UNCOMMON** – Uncommon operations, procedures, or endeavors for a breast surgeon in practice and not typically done in significant numbers by trainees; specific procedure competency required by end of training, but cannot be attained by case volume or participation in the activity/endeavor alone.

**COMPLEX** – Not consistently performed by a breast surgeon in training and not typically performed in practice. Generic experience in complex procedures or endeavors in training is required, but not competence in individual procedures/endeavors.
BENIGN BREAST DISEASE

Breast Diseases/Conditions

BROAD

Breast pain
Breast mass:
Cyst Fibroadenoma Phyllodes:
Benign
Borderline Diabetic mastopathy
Fat necrosis
Galactocele
Mondor’s disease
Nipple discharge:
Intraductal papilloma: Duct ectasia
Breast infections:
Lactational mastitis
Non-lactational mastitis
Subareolar abscess
Granulomatous mastitis
High risk lesions:
Flat epithelial atypia
Columnar cell change with atypia
Atypical lobular hyperplasia
Atypical ductal hyperplasia
Lobular carcinoma in situ - classic form
Radial scar
High risk patients:
Family history Childhood radiation:
Mantle radiation for lymphoma
BRCA 1 and 2 mutation carriers
Other mutation carriers: CDH1, PALB2, PTEN, P53, ATM
Role for and utility of chemoprevention
Peripartum issues surrounding physiologic breast changes, breast feeding and breast health

BREAST IMAGING

Breast Diseases/Conditions

BROAD

Ultrasound
Mammogram
MRI
BIRADS classification
Indications and contraindications for stereotactic biopsy
Digital tomosynthesis
Knowledge of advanced breast imaging indications

FOCUSED

PEM
Molecular breast imaging

MALIGNANT BREAST DISEASE

Breast Disease/Conditions

MALIGNANT BREAST DISEASE

BROAD

Lobular carcinoma in situ- pleomorphic
Paget’s disease of the nipple
Ductal carcinoma in situ
Invasive ductal carcinoma
Invasive lobular carcinoma
Locally advanced breast carcinoma
  o Operable
  o Non-operable
Inflammatory breast carcinoma
Tubular carcinoma
Mucinous carcinoma
Other variants
Metaplastic breast cancer
Malignant Phyllodes
Pregnancy associated/lactation associated breast carcinoma
Occult primary breast carcinoma with axillary metastasis
Male breast cancer
Hereditary breast cancer:
  o Family history positive
  o BRCA 1 and 2
  o Appropriate ordering of genetic germline mutation testing
Hormone receptor status:
  o ER/PR positive
  o Her2 positive
  o Triple negative
Recurrent Breast CA
  o S/P mastectomy
  o In breast recurrence s/p partial mastectomy

FOCUSED

Metastatic disease to the breast:
  o Lymphoma
  o Melanoma
2019 Breast Surgical Oncology Fellowship Curriculum and Minimum Training Requirements
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- Thyroid
- Primary sarcoma of the breast
- Metastatic breast cancer to other sites
- Hereditary breast cancer
  - P53, PTEN, CHEk

**Operations/Procedures**
**ESSENTIAL-COMMON**
Breast ultrasound
Cyst aspiration
FNA
Percutaneous core needle sampling
Skin punch biopsy
Diagnostic excisional biopsy, with/without wire/seed/ultrasound localization
Central/Major/Terminal duct exploration and excision
Partial mastectomy, with/without image-guided localization (wire/seed/ultrasound)
Oncoplastic partial mastectomy

**Mastectomy:**
  - Total mastectomy
  - Skin-sparing
  - Nipple/areolar sparing

**Axillary sentinel node dissection**
  - Blue dye
  - Nuclear injection
  - Both

**Axillary node dissection**

**ESSENTIAL-UNCOMMON**
Percutaneous core needle sampling
  - Ultrasound guided
Level 3 node dissection
Radical mastectomy
Chest wall resection

**COMPLEX**
Stereotactic core biopsy
MRI biopsy

**PLASTIC AND RECONSTRUCTIVE SURGERY**

**Diseases/Conditions**

**BROAD**
Partial mastectomy breast defects
Post-mastectomy defects
FOCUSED

Breast asymmetry after breast conservation
Chest wall defects following resection of locally advanced breast cancer

Operations/Procedures

ESSENTIAL-COMMON

Oncoplastic closure of partial mastectomy defects

ESSENTIAL-UNCOMMON

Local tissue flap closure for acquired surgical defect

COMPLEX

Tissue expander placement
Permanent silicone implant placement
Pedicle flaps for breast reconstruction:
  - Latissimus dorsi
  - TRAM
Free flap for breast reconstruction:
  - DIEP
  - Gluteal
  - TUG
Mastopexy for symmetry
Fat grafting and lipofilling

MEDICAL ONCOLOGY

Diseases/Conditions

BROAD

Chemotherapy principles and mechanisms of action

FOCUSED

Management of common complications of chemotherapeutic administration
Use of gene signatures to direct systemic treatment recommendations
Management of hormone receptor positive breast cancers
  - Early stage
  - Late stage
Management of hormone receptor negative breast cancers
  - Early stage
  - Late stage
Management of Her2 neu positive breast cancers
Management of cancers by stage:
  - T stage
  - Node negative
Indications for neoadjuvant systemic therapy, specifically with regards to optimization of breast conserving therapy
Systemic treatment for the de novo stage 4 patient

PALLIATIVE CARE, END OF LIFE

Diseases/Conditions
BROAD

Psycho-oncology includes the supportive care and management of depressive and anxiety symptoms that frequently occur in the setting of chronic complications or living with active disease for a protracted period of time. A single lecture on psycho-oncology does not satisfy this requirement.
Palliative care includes symptom treatment, hospice and end of life care and discussions, as well as management of cancer-related pain, nutrition, exercise and weight management options.
A formal experience in this is expected with exposure to end of life discussion and transitions of care to hospice. This may be an integrated experience and a rotation on a palliative care service is not required. It must be documented how the fellow obtains this experience longitudinally if a rotation is not used to satisfy this requirement. A single lecture on palliative care and end-of-life issues does not satisfy this requirement.

- Program directors and administrators are directed to the FAQ section of the SSO training website for additional information.

RADIATION ONCOLOGY

Diseases/Conditions
BROAD

Radiation biology principles
Radiation indications:
- Breast conservation:
  - Whole breast radiation
  - Partial breast radiation
- Post-mastectomy radiation

FOCUSED

Management of common radiation complications
Partial breast radiation:
- Interstitial brachytherapy
- Balloon brachytherapy
- External beam partial breast
Radiation therapy for metastatic disease:
  o Regional
  o Distant
    Treatment
    Palliation
Radiation simulation/planning

Operations/Procedures COMPLEX
  Partial breast radiotherapy techniques
  Intraoperative radiation therapy

SURGICAL MANAGEMENT/COUNSELING FOR GENETIC SYNDROMES

Diseases/Conditions BROAD
  Family history
  BRCA 1
  BRCA 2
  P53 mutations (Li Fraumeni)
  Cowden’s syndrome
  CHEK
  Knowledge of other panels

PALLIATIVE INTENT SURGERY

Diseases/Conditions FOCUSED
  Asymptomatic Stage 4 breast cancer
  Symptomatic Stage 4 breast cancer
    o Resectable breast/node disease
    o Unresectable breast/node disease
      Chest wall involvement
      Skin involvement

Operations/Procedures ESSENTIAL-UNCOMMON
  Palliative mastectomy

CLINICAL AND BASIC RESEARCH

Diseases/Conditions BROAD
  Protection of Human Subjects
Inclusion of diverse study populations
Basic Statistical Analysis
Institutional Review Board process and application
Database management, Retrospective Reviews
Defining Hypothesis and Study Aims
Evaluation of Study Design

**FOCUSED**
Assessment of Clinical Trial, Defining levels of Evidence/meta-analysis
Selection of primary and secondary endpoints
Defining study populations, sample size, power
Basic Survival Analysis
Assessment of Health Related QOL
Fundamentals of Health Outcomes Studies

**Application**
**ESSENTIAL-COMMON**
- Participation in a journal club – clinical or science
- Retrospective review study of a database or case study
- Writing, submission and presentation of a cancer-related abstract
- Manuscript preparation, writing and submission
- Identification and Recruitment of patients to a clinical trial

**ESSENTIAL-UNCOMMON**
- Participation in a cooperative trial group meeting

**COMPLEX**
- Writing a grant – clinical or scientific
- Writing an IRB application

**COMMUNITY OUTREACH AND LEADERSHIP**

**Diseases/Conditions**

**BROAD**
Communication with and education of the non-medical community
  - Cancer screening
  - Cancer prevention
  - Cancer diagnosis
  - Cancer treatment
Communication and interaction with cancer support groups
  - Breast disease
Communication with and education of non-oncologic physicians
  - Cancer screening
  - Cancer prevention
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Cancer diagnosis
  o Cancer treatment
Communication and interaction with non-oncologic surgeons
  o Clinical trials
  o Multidisciplinary conferences
Understand disparities in screening, diagnosis, and treatment of cancer
Presentation skills
  o Slide presentation
  o Public speaking skills
  o Panel discussion skills
Effective preparation of educational material
  o For general public
  o For patients
  o For families of patients
  o For fellows, residents, students
  o Computer/web-based
  o Print material

**FOCUSED**  
Role within American Cancer Society, Komen, etc.

**COMPLEX**

Understanding of and possible effective preparation of outreach or screening grants
Effective presentation at community outreach

**Operations/Procedures**

**ESSENTIAL-COMMON**
  Attend and participate in cancer-support groups
  Conference participation with general surgery and subspecialty colleagues
  Lecture/talk to other fellows, residents, medical students

**ESSENTIAL-UNCOMMON**
  Lecture/talk to non-oncologic physicians
  Participation in American Cancer Society, Komen or similar screening and outreach events
  Prepare outreach/screening material
  Prepare outreach/screening grant

**COMPLEX**
  Attend Commission on Cancer
  Attend other Society/foundation meetings

**PATHOLOGY**
Diseases/Conditions

**BROAD:**

**FOCUSED:**
- Solid tumor margin assessment
- Nodal evaluation
  - Sentinel lymph node
  - Nodal dissection specimen
- Pathologic Analysis
  - Frozen section, routine staining, immunohistochemistry
  - Pathologic staging of tumors
  - Intraoperative analysis

**Operations/Procedures**

**ESSENTIAL-COMMON**
- Fine needle aspiration biopsy

**ESSENTIAL-UNCOMMON COMPLEX**
- Margin assessment and preparation
  - Lumpectomy
  - Mastectomy
- Cytologic analysis
- Frozen section preparation and analysis
- Touch preparation
- Sentinel node processing and analysis
- Handling and pathologic assessment of regional lymphadenectomy specimen

**CANCER REHABILITATION**

**Diseases/Conditions**

**BROAD**
- Preoperative assessment of disability
- Preoperative assessment of impact on activities of daily life

**FOCUSED**
- Postoperative/treatment evaluation and management of disability
- Postoperative/treatment evaluation and management of impact on activities of daily life
- Postoperative/treatment evaluation and intervention for
  - Home
  - Place of work
  - Family/support network
- Lymphedema management
  - Preoperative assessment
  - Postoperative monitoring and treatment
Operations/Procedures:

ESSENTIAL-COMMON ESSENTIAL-

UNCOMMON

COMPLEX
  Physical therapy
  Occupational therapy
  Lymphedema prevention and treatment

OTHER
Coding and billing of breast diseases and procedures
Classification System

Operations/Procedures

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**ESSENTIAL-COMMON**

Breast ultrasound – 15 (hands on) or 30 (observation only)

Percutaneous Procedures – 13
  o Fine needle aspiration
  o Cyst aspiration
  o Percutaneous core needle sampling, palpation or image guided
  o Seroma aspiration with/without drain placement
  o Percutaneous abscess drainage with/without drain placement

Major ductal exploration and excision for nipple discharge – 1

Partial mastectomy or diagnostic excisional biopsy – 50
  o Palpation guided
  o Image guided
  o Oncoplastic partial mastectomy

Mastectomy – 40 spread over all categories
  o Total mastectomy
  o Skin-sparing mastectomy
  o Nipple/areolar sparing mastectomy

Axillary sentinel node biopsy – 50

Level 1, 2 completion axillary node dissection – 10
ESSENTIAL-UNCOMMON (No numbers set)
Level 3 node dissection
Palliative mastectomy for stage 4 disease
Chest wall recurrence /radical resection
Plastic Surgery
  o Local tissue flap closure for tissue defect
  o Breast Reconstruction with Tissue Expander
  o Tissue expansion procedure
  o Exchange of Expanders to Implants
  o Breast Reconstruction with Autologous Tissue Transfer
    o Pedicle flaps (latissimus, TRAM)
    o Free flaps (free TRAM, DIEP, etc.)
  o Nipple reconstruction
  o Areolar tattooing
  o Breast reduction
  o Mastopexy for symmetry

COMPLEX – EXPERIENCE AS AVAILABLE (No numbers set)
Vacuum-assisted core biopsy (must have experience with and exposure to listed biopsy techniques)
  o Image guided
    Stereotactic
    Ultrasound
    MRI
Clip placement
  o Image guided
    Stereotactic
    Ultrasound
    MRI
Placement of localizing wire or seed
  o Image guided
    Stereotactic
    Ultrasound
    MRI
Tumor ablation
  o Palpation guided
  o Image guided
Subcutaneous mastectomy for gynecomastia
Radical mastectomy
Radiation Oncology

- Partial breast techniques
  - Interstitial brachytherapy catheters
  - Intracavitary balloon radiation
  - External beam

- Intraoperative radiation therapy

NON-OPERATIVE EXPOSURE

**Medical oncology**
- 15 new breast cancer / recurrent disease consultations
- 15 follow-up visits

**Radiation oncology**
- 15 new breast cancer consultations
- 5 new breast cancer or recurrent breast cancer simulations
- 15 f/u visits and/or physics reviews

**Pathology**
- 8 cancer case sign-outs
- 8 frozen or intra-op evaluations
- 8 benign and/or high risk lesions

**Plastic Surgery**
- 8 reconstructive cases

**Genetic Consultations**
- 3 observed consultations

**Imaging**
- 8 screening cases
- 8 breast ultrasound and/or nodal ultrasound
- 8 diagnostic mammograms
- 8 breast MRIs