Course Title: Minimally Invasive Procedures of the Breast

Course Director: Name: Roshni Rao, MD  
Specialty: Breast Surgical Oncology

Participants: Specialty: General Surgery  
Level: R2 Residents (3 sessions total)  
Number of participants for the entire course: R2:15

Expected Attendance:

# of Wednesday Morning Sessions Assigned to Each Trainee: 3
Duration of Each Session (max 2 hrs): 2 hrs
# of Trainees per session: 15

# of Other Assigned Sessions: NA
Duration of Each Session: NA hrs
# of Trainees per session: NA
When will these other sessions be held? NA

Course Completion Verification - How do you know when a trainee has completed each component of the course and the overall course itself? Please specify for each course component, if applicable.

Assigned reading component verified by oral questioning to be conducting during introductory 20 minute didactic session. Skills component verified by attendance for duration of session.

x Attendance-based - based on the trainee attending all designated sessions

Entire Course - Is the entire course solely based on attendance?

x Part of the Course – Is attendance to designated sessions required in addition to other components, as listed below?

Repetition-based - based on the trainee performing a specified number of repetitions

Component(s): Fine Needle Aspiration: Demonstrate ability to infiltrate local anesthesia, obtain aspirate, and thereafter place onto slides appropriately.

Proficiency-based - based on the trainee reaching a specified level of proficiency

1. Component(s):
2. Component: Core Biopsy: Demonstrate understanding of rationale for core biopsy versus FNA, infiltrate anesthetic, obtain adequate core samples.

3. Component: Ultrasound guided procedures: Vocalize understanding for rationale for ultrasound use, demonstrate appropriate transducer placement, appropriate positioning of ultrasound machine/patient/physician, obtain adequate tissue.

Method for determining proficiency: Checklist of steps & observation.

____ Written Testing - based on passing a written test
Component(s): 

____ Documentation of Watching Videos/CD’s/Web-based Materials - based on proctor or instructor verification that the trainee has watched the specified videos/CD’s/Web-based materials
Component(s): 

____ Other Methods (specify method)
Component(s): 

Self-study or Self-practice (Is self-study or self-practice an expectation of this course?)

____ No

x____ Yes (specify)

Self-study component(s): “Fine needle aspiration, techniques & smear preparation” by David Lieu for percutaneous biopsy session, Book chapters from A. Thomas Stavros’ “Breast Ultrasound” for ultrasound guided session, and most recent update on Mammosite studies will be photocopied and given to participants 2 weeks prior to course

Estimated time requirements for self-study: ___1/2___ hrs. per session
During what phase(s) of the course is self-study to be completed? Prior To course

Self-practice component(s): NA
Estimated time requirements for self-practice: _______ hrs.
During what phase(s) of the course is self-practice to be completed? 

Training Location(s): Skills Lab (E6.202)

Equipment/Simulator(s): 3 Automated Core biopsy devices
3 Turkey breast phantoms with simulated masses
2 Mammatome Vacuum-assisted biopsy devices
3 Ultrasound Machines
3 Commercial breast phantoms
12 Butterfly needles and syringes
3 Mammosite balloons
Latex gloves-box
Pap & formalin fixatives
11 blade knives (3)
12 cc syringes (3)

Other Resources (Textbooks, CD-ROMS, Videos, etc):
A. Thomas Stavros “Breast Ultrasound.”
B. Selected readings from ASBS ultrasound course

Educational Scope:

Yes ___ Skills – does this course teach technical skills?
Component(s): Ability to perform FNA versus core biopsy versus Mammosite placement, performed with and without ultrasound guidance

Yes ___ Cognitive - does this course teach cognitive (knowledge) material?
Component(s): Lectures given on each topic and information given in the form of book chapters.

Yes ___ Judgment – does this course teach trainees judgment (intraoperative or clinical decision-making)?
Component(s): What clinical situations require the use of one biopsy technique versus another?

Learning Objectives:

1. Understand the indications and techniques for performance of FNA versus Core biopsy in palpable breast masses.
2. Understand the indications and techniques for performance of ultrasound guided vacuum assisted core biopsy.
3. Understand the current indications and techniques for breast Mammosite placement.

Summary of Curriculum, Teaching Methods, and Resource Utilization (For each component, please specify what material will be taught during each session, how will the material be taught, and what teaching materials will be used. Please also specify the overall format of the course including expectations required for successful course completion):

1st Session: Percutaneous biopsy of palpable mass using FNA or Core biopsy:
   1. Handout of fine needle aspiration technique and core biopsy technique given 2 weeks prior to course
   2. Twenty minute lecture with interactive questions
3. Turkey breast with green olives used as model (3 models per session, 3-4 students per model), Tru-cut biopsy needles, Mammotome biopsy needle
   a. Performance of FNA and core biopsy by instructor
   b. Individual students given opportunity to attempt biopsy
   c. Final performance of one FNA and one core biopsy by each student with observation and assessment by instructor (see sheet)

2nd Session: Ultrasound guided vacuum assisted core biopsy
   1. Handout describing basic breast ultrasound and vacuum assisted core biopsy given 2 weeks prior to course
   2. Twenty minute lecture with interactive questions
   3. Commercial breast phantoms used as model
      a. Vacuum assisted core biopsy with ultrasound guidance demonstrated by instructor
   4. Performance of biopsy by each student with instructor assessment and evaluation

3rd Session: Ultrasound guided Mammosite placement

Methods for giving feedback to learners (Formative and Summative):
   1. During the practice phase, instructor will provide feedback directly to students.
   2. Each student will receive a copy of the final evaluation given at the end of the session.

Methods for Assessment of Learners:
   1. Direct observation by instructor using attached evaluation checklist.
   2. Objective evidence of appropriate tissue within biopsy taken.

Methods for Remediation:
   1. Based on final evaluation at end of every session, if there is a student who is unable to perform the technique and obtain appropriate tissue, a second session with one on one instruction will be arranged.

Methods for Course Evaluation:

   By Learners: E-Value online system
   Other Methods (specify) ____________________________

   By Faculty: E-Value online system
   Other Methods (specify) ____________________________