

**UT SOUTHWESTERN DEPARTMENT OF SURGERY**  
**TECHNICAL SKILLS COURSE OUTLINE**

**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): \_\_\_\_\_  
# of Repetitions: \_\_\_\_\_

x Proficiency-based - based on the trainee reaching a specified level of proficiency  
1. Component(s): Fine Needle Aspiration: Demonstrate ability to infiltrate local anesthesia, obtain aspirate, and thereafter place onto slides appropriately.

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 Mammotome 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):

1<sup>st</sup> 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)

2<sup>nd</sup> 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

3<sup>rd</sup> 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*) \_\_\_\_\_

