

EPA3-BR Worksheet

Title	Performing biopsies using imaging guidance and determining appropriate post-procedural management <ul style="list-style-type: none"> - EPA3a: Stereotactic biopsy - EPA3b: Ultrasound - EPA3c: MRI *elective EPA
Description of Activity	<p>A key role of breast imaging radiologists is to accurately perform image-guided procedures by means of stereotactic, ultrasound and MRI guidance (those with fellowship training) from pre-procedure planning and execution to post-procedure follow-up, including radiologic-pathologic concordance.</p> <p>The key functions which define this EPA include:</p> <ul style="list-style-type: none"> ● Understand indications/contraindications for each case^{1,2,3} ● Determine appropriate patient positioning and biopsy approach^{1,2,3} ● Obtain informed consent² ● Display technical skills with guidance modality and procedure equipment while using sterile technique^{4,9,10} <ul style="list-style-type: none"> ○ Understand the physics behind 2D and 3D guided stereotactic biopsy^{3,4,5,6,7} ○ Determine appropriate adjustments when encountering technical limitations (needle repositioning, machine errors)^{1,4,5,6} ● Procure a sufficient sample and properly label the specimen^{2,28} ● Determine if the sample is adequate prior to clip placement/procedure termination²⁸ ● Provide appropriate post-biopsy care to obtain hemostasis^{2,23,24,25} ● Document procedural report including pathology addenda into the electronic medical record² ● Determine, communicate and document radiology-pathology concordance and post-procedural management^{2,26,27} ● Recognize symptoms and clinical signs of post-biopsy complications (infection, hematoma, expanding hematoma/continued bleeding from the puncture site, allergic reaction, milk fistula) and determine appropriate management^{23,24,25} ● Display professional and compassionate communication with the patient, ordering physician, and ancillary staff and document in the medical record when appropriate^{32,33,34} <p>Superscript indicate resources below which address the key function</p> <p>Context: Outpatient clinic, hospital Targeted transition point: Third-month rotation in training</p>

This is from:

Breast Radiology Entrustable Activity Supervision Tool

Monica Sheth, MD; S; Ryan Woods, MD; Katherine Klein, MD Priscilla Slanetz, MD; Alice Fornari, EdD; Petra Lewis, MBBS, 2019

<p>Suggested Resources (Radiographics articles, educational exhibits, online resources, PowerPoint presentations)</p>	<ol style="list-style-type: none"> 1. Troubleshooting to Overcome Technical Challenges in Image-guided Breast Biopsy 2. Breast Intervention: How I do It 3. SBI : Breast Biopsy: Beyond the Basics <p><u>Stereotactic/Tomosynthesis biopsy</u></p> <ol style="list-style-type: none"> 4. Breast Stereo Pairs Widget 5. Tomosynthesis guided biopsy 6. Calcifications at Digital Breast Tomosynthesis: Imaging Features and Biopsy Techniques 7. Comparison of Upright Digital Tomosynthesis-guided versus Prone Stereotactic Vacuum-assisted Breast Biopsy 8. UPright Stereo Mammotome (Video) <p><u>Ultrasound biopsy</u></p> <ol style="list-style-type: none"> 9. Centering on a lesion on US breast biopsy video 10. Biopsy deep breast lesions video 11. Concordant or Discordant? Imaging-Pathology Correlation in a Sonography Guided Core Needle Biopsy of Breast Lesion 12. Imaging-Histological Discordance after Sonographically Guided Percutaneous Breast Core Biopsy 13. A Novel technique for teaching Challenging Ultrasound Breast Biopsies to Radiology Residents 14. Evaluations of Newly Adapted Clip Marker System in Ultrasound-guided core Needle Biopsy for Suspicion of Breast Cancer 15. Training modules to teach ultrasound-guided breast biopsy skills to residents improves accuracy. 16. Ultrasound Technique Part 1 (Video) 17. Ultrasound Technique Part 2 (Video) 18. Temno Technique (Video) <p><u>MRI biopsy</u></p> <ol style="list-style-type: none"> 19. MRI Breast Biopsy Challenges - Widget 20. Manual targeting Breast MRI Biopsies - Widget 21. MRI Biopsy Demo (Video) 22. MRI Biopsy Demo (Video) <p><u>Biopsy Complications</u></p> <ol style="list-style-type: none"> 23. Breast Emergencies: Types, Imaging Features, and Management 24. Breast Emergencies and Guide to Management 25. Breast Emergencies (Book Chapter) <p><u>Radiology/Pathology Concordance (or we can put this in each respective section)</u></p> <ol style="list-style-type: none"> 26. Pathologists and Radiologists Stress Concordance Between Imaging and Lab 27. Tomosynthesis Detected Architectural Distortion: Management Algorithm with Rad-Path Correlation
--	---

This is from:

Breast Radiology Entrustable Activity Supervision Tool

Monica Sheth, MD; S; Ryan Woods, MD; Katherine Klein, MD Priscilla Slanetz, MD; Alice Fornari, EdD; Petra Lewis, MBBS, 2019

	<p>28. Core Needle of the Breast; Updates</p> <p>29. University of Michigan Rad/Path Correlation</p> <p>30. Triple-Negative Breast Cancer: Correlation between MR Imaging and Pathologic Findings</p> <p>31. Fibrous Lesions of the Breast: Imaging-Pathologic Correlation</p> <p>Communication</p> <p>32. Patient Anxiety Before and Immediately After Imaging-Guided Breast Biopsy Procedures: Impact of Radiologist-Patient Communication</p> <p>33. Breaking Bad News</p> <p>34. Breaking the News of Breast Cancer Over the Phone</p>
Mapping to Domains of Competence	<p><input checked="" type="checkbox"/> Patient Care</p> <p><input checked="" type="checkbox"/> Medical Knowledge</p> <p><input checked="" type="checkbox"/> Systems-Based Practice</p> <p><input checked="" type="checkbox"/> Practice-Based Learning and Improvement</p> <p><input checked="" type="checkbox"/> Professionalism</p> <p><input checked="" type="checkbox"/> Interpersonal and Communication Skills</p>
Competencies within each domain critical to entrustment decisions	<p>PC1: Reporting</p> <p>PC2: Clinical Consultation</p> <p>PC3: Image Interpretation</p> <p>PC4: Competence in Procedures</p> <p>MK1: Diagnostic Knowledge</p> <p>MK2: Physics</p> <p>MK3: Protocol Selection and Contrast Agent Selection/Dosing</p> <p>MK4: Imaging Technology and Image Acquisition</p> <p>SBP1: Patient Safety</p> <p>SBP3: System Navigation for Patient-Centered Care</p> <p>SBP4: Physician Role in Health Care Systems</p> <p>SBP5: Contrast Agent Safety</p> <p>SBP6: Radiation Safety</p> <p>SBP7: Magnetic Resonance (MR) Safety</p> <p>SBP8: Informatics</p> <p>PBL11: Evidenced-Based and Informed Practice</p> <p>PBL12: Reflective Practice and Commitment to Professional Growth</p> <p>P1: Professional Behavior and Ethical Principles</p> <p>P2: Accountability/Conscientiousness</p> <p>ICS1: Patient- and Family-Centered Communication</p> <p>ICS2: Interprofessional and Team Communication</p> <p>ICS3: Communication with Health Care Systems</p>
Required knowledge, skills, attitude and behavior, and experience	<p><u>Knowledge</u></p> <ol style="list-style-type: none"> 1. Knowledge of breast and axillary anatomy 2. Ability to synthesize image findings and data prior and during the procedure <p><u>Skills</u></p> <ol style="list-style-type: none"> 1. Using necessary devices for biopsy and clip placement 2. Positioning patient appropriately to aide in localization

This is from:

Breast Radiology Entrustable Activity Supervision Tool

Monica Sheth, MD; S; Ryan Woods, MD; Katherine Klein, MD Priscilla Slanetz, MD; Alice Fornari, EdD; Petra Lewis, MBBS, 2019

	<p>3. Acquiring proper pre-procedural data (allergies, anticoagulation, etc) 4. Obtaining adequate samples from the target</p> <p><u>Attitude and Behaviour</u></p> <p>1. Professional and compassionate communication and behavior with the patient, families, referring physicians and ancillary staff</p> <p><u>Experience</u></p> <p>1. All measures completed at least 3-10 times per biopsy approach</p>
Assessment Information sources to assess progress and ground summative entrustment decision	<p>Knowledge Assessment: (in progress)</p> <p>Observation: satisfactory observation of technical procedure from start (informed consent) to finish (communication of results to patient/ordering physician) at least 5-10 times.</p> <p>10-20 Informal Case-based discussion per modality with an attending radiologist</p>
Entrustment level of supervision to be reached at which stage of training	<p>Residents: Indirect supervision (level 3) prior to graduation Mini-fellows: Distant supervision (level 4) prior to graduation Fellows: Able to execute without supervision (level 5) or supervise others (level 6) prior to graduation</p>
Expiration	One year after completion

*Modified from the work of Olle ten Cate

This is from:

Breast Radiology Entrustable Activity Supervision Tool

Monica Sheth, MD; S; Ryan Woods, MD; Katherine Klein, MD Priscilla Slanetz, MD; Alice Fornari, EdD; Petra Lewis, MBBS, 2019