

EPA4-BR Worksheet

Title	Evaluation and staging patients with newly and previously diagnosed breast cancer
Description of Activity	<p>Key roles for radiologists involved in breast imaging are to stage and restage breast cancer, both locoregionally and systemically, and to be an imaging consultant to multidisciplinary teams involved in the patient's care.</p> <p>The key functions which define this EPA include:</p> <ul style="list-style-type: none"> ● Perform ultrasound evaluation and biopsy of the axilla for metastatic nodal disease³ <ul style="list-style-type: none"> ○ Describe the 3 surgical levels of axillary lymph nodes^{2,3,4} ○ Recognize findings of abnormal lymphadenopathy ○ Determine when tissue sampling is indicated ○ Apply evidenced based criteria to the evaluation of axillary disease¹ ● Interpret breast MRI scans for multifocal, multicentric, contralateral or locally recurrent disease^{19,20,21,22,23} <ul style="list-style-type: none"> ○ Identify signs of lymphadenopathy (internal mammary and axillary) ○ *Determine when second-look ultrasound is indicated versus short interval follow up or direct to MRI guided biopsy⁹ ○ Recommend the appropriate modality for biopsy of suspicious findings (MR, US, MG) correlating findings with recent imaging¹⁰ ● *Describe key changes in tumor size, node involvement, and metastasis that change cancer staging (using NCCN and ACS guidelines)⁸ ● Describe the typical appearance of post surgical/radiation changes on mammography, ultrasound and MRI^{11,13,14} ● Differentiate fat necrosis, post-surgical scar or other benign post-treatment change from recurrent disease on mammography, ultrasound and MRI^{11,13,14} ● *Identify typical changes associated with common types of breast reconstruction on mammography and MRI¹³ ● *Evaluate the effects of neoadjuvant chemotherapy by MRI, ultrasound and/or mammography^{15,16} ● *Describe the utility in PET/CT and bone scanning in staging patients with breast cancer⁸ ● *Collaborate with surgeons, radiation therapists, pathologists, oncologists and other specialists involved with the care of the breast cancer patient to define appropriate problem solving imaging strategies^{17,18}

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>Superscript indicate resources below which address the key function</p> <p>Context: Outpatient imaging, ambulatory care, hospital Targeted transition point: Depending on the institution - End of 3rd month of mammography. Items marked * may be more suitable for by month 3 of mini-fellowship or fellowship for some programs</p>
<p>Suggested Resources (radiographics articles, educational exhibits, online resources, powerpoint presentations)</p>	<p><u>Breast Cancer Staging</u></p> <ol style="list-style-type: none"> 1. Axillary Staging of Breast Cancer: What the Radiologist Needs to Know 2. Resident and Fellow Education Feature: US Evaluation of Axillary Lymph Nodes 3. Stavros' YouTube US eval of the Axilla 4. Imaging the Axilla Widget 5. American Joint Committee on Cancer Staging System for Breast Cancer, Eighth Edition: What the Radiologist Needs to Know 6. Powerpoint: Breast Cancer workup for Medical Students and Residents 7. What Radiologists Need to Know about Diagnosis and Treatment of Inflammatory Breast Cancer: A Multidisciplinary Approach 8. NCCN breast cancer staging guidelines (need free sign up) 9. MR-Directed ("Second-Look") Ultrasound Examination for Breast Lesions Detected Initially on MRI: MR and Sonographic Findings 10. ACR Practice Parameter for Performance of Contrast Enhanced Magnetic Resonance Imaging (MRI) of the Breast <p><u>Post Surgical Breast</u></p> <ol style="list-style-type: none"> 11. Update on Imaging of the Postsurgical Breast 12. Imaging of Breast Implant-associated Complications and Pathologic Conditions: Breast Imaging 13. Breast Reconstruction: Review of Surgical Methods and Spectrum of Imaging Findings 14. MR Imaging Assessment of the Breast after Breast Conservation Therapy: Distinguishing Benign from Malignant Lesions <p><u>Neoadjuvant Therapy</u></p> <ol style="list-style-type: none"> 15. Imaging Neoadjuvant Therapy Response in Breast Cancer 16. Multimodality Imaging for Evaluating Response to Neoadjuvant Chemotherapy in Breast Cancer <p><u>Multi-disciplinary Team</u></p> <ol style="list-style-type: none"> 17. A Multidisciplinary Approach to the Management of Breast Cancer, Part 1: Prevention and Diagnosis 18. You tube video: Working with breast interdisciplinary teams as a radiologist <p><u>Breast MRI interpretation</u></p> <ol style="list-style-type: none"> 19. You tube video: Breast MRI interpretation 20. You tube video: 2013 ACR Bi-RADS for Breast MRI

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	<p>21. Non-mass Enhancement on Breast MRI: Review of Patterns With Radiologic-Pathologic Correlation and Discussion of Management</p> <p>22. You tube video: Breast MRI current uses</p> <p>23. You tube video: Breast MRI Common Findings and cases</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>MK1: Diagnostic Knowledge</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>PBLI1: Evidenced-Based and Informed Practice</p> <p>PBLI2: 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>Knowledge</p> <ul style="list-style-type: none"> ● Knowledge of the normal and abnormal appearance of axillary nodes and on ultrasound, mammography and MRI ● Knowledge of the defining criteria for multifocal, multicentric, locally advanced and metastatic disease ● Explain how specific imaging findings may impact surgical and medical approaches to management ● Knowledge of the role of auxiliary imaging studies eg PET, CT for staging <p>Skill</p> <ul style="list-style-type: none"> ● Identifying findings on MRI, ultrasound and mammography that indicate more extensive or recurrent disease ● Interpreting imaging findings that indicate treatment response ● Identifying typical treatment changes ● Synthesizing current and previous imaging findings into an assessment

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	<p>of patient's stage and further potential imaging options</p> <p>Attitude and behavior</p> <ul style="list-style-type: none"> ● Professional communication with patients and multiple providers ● Ability to present imaging data concisely and coherently in a multidisciplinary conference setting ● Willingness to consult with others on complex cases <p>Experience</p> <ul style="list-style-type: none"> ● Independent axillary scanning (>10) ● Independent interpretation of follow up mammography after BCT (>50) ● *Independent MRI interpretation of staging studies (>15) ● Attendance and observation at multidisciplinary conferences (>5) ● *Preparation of cases for multidisciplinary conferences (>5) ● *Presenting at multidisciplinary conferences (>2) <p>* Institution specific, as may be more suitable for breast imaging mini-fellows and fellows</p>
Assessment Information sources to assess progress and ground summative entrustment decision	<p>Knowledge Assessment: Under development</p> <p>Observation of axillary scanning (>10 cases)</p> <p>Reviews of interpretations of staging and follow up imaging studies (>20 cases)</p> <p>Discussion of cases prepared for conference (>5)</p> <p>Observation of multidisciplinary conference presentations(>2)</p> <p>10-20 Informal Case-Based Discussion with attending radiologist (either cases for tumor board or diagnostic mammograms/ultrasound/MRI).</p>
Entrustment level of supervision to be reached at which stage of training	<p>Residents: Indirect supervision (level 3) prior to graduation</p> <p>Mini-fellows: Distant supervision (level 4) prior to graduation</p> <p>Fellows: Able to execute without supervision (level 5) or supervise others (level 6) prior to graduation</p>
Expiration	2 years after graduation

*Modified from the work of Olle ten Cate

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