

EPA2-BR Worksheet

Title	Working-up and managing patients in the diagnostic imaging setting EPA2a: Mammographic and sonographic abnormalities in the asymptomatic patient (screening callbacks) EPA2b: Patients presenting with breast symptoms
Description of Activity 2b. Symptomatic patients are patients who present with: palpable breast and/or axillary masses in men, women (including pregnant and lactating) and children, breast pain, nipple discharge & changes, inflamed breast.	<p>A breast imaging radiologist is able to work-up abnormalities detected on screening mammography and determine whether additional mammography or sonography, alone or in conjunction, may be indicated for evaluation. Similarly, when a patient presents with a breast symptom, a radiologist must be able to determine the appropriate sequence and type of imaging evaluation and when biopsy is necessary.</p> <p>Once diagnostic imaging is complete, the appropriate BIRADS assessment must be determined along with management. The physician must be able to clearly and effectively convey the results and recommendations to the referring clinician and patient, using layman's terms when appropriate to increase understanding without raising alarm. ^{27,28}</p> <p>The key functions which define this EPA include:</p> <ul style="list-style-type: none"> ● Determine which mammographic and/or sonographic views are indicated to evaluate an abnormal finding on screening mammography (technical recall, calcifications, asymmetry, focal asymmetry, mass, architectural distortion). ^{1-6, 7-13} ● Differentiate benign, probably benign, suspicious and malignant findings on mammography and sonography and determine appropriate management. ^{1-6, 7-13} ● Correlate ultrasound findings with screening mammography. ^{7,8,10-12} ● Understand age and gender appropriate sequential imaging work-up for a male or female presenting with a breast symptom(s) and how that differs if patient is pregnant or breastfeeding. Symptoms include: <ul style="list-style-type: none"> ○ Palpable breast or axillary mass ^{2,14} ○ Breast pain ¹⁶ ○ Nipple discharge & changes (recognize key history and clinical findings that suggest benign or malignant etiology) ¹⁷ ○ Inflamed breast ^{18, 20-23} ● Differentiate mammographic and sonographic findings that are benign, probably benign, suspicious and malignant, including but not limited to: <ul style="list-style-type: none"> ○ Inflammatory breast cancer from abscess ^{14, 15, 18} ○ Gynecomastia from male breast cancer ^{22, 24-26} ● Manage focal symptoms when there is no associated imaging finding ^{5,14} ● Recommend the appropriate modality for biopsy of suspicious findings ^{6,8,14,16,17,19,24}

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

	<ul style="list-style-type: none"> • Identify when surgical referral is needed ⁶ • Apply evidence based medicine to patient care ^{6,8,16,17,19,24} • Display professional and compassionate communication with the patient, ordering physician, and ancillary staff and document in medical record when appropriate ^{27,28} <p>Superscript indicate resources below which address the key function</p> <p>Context: outpatient imaging center Targeted transition point: third month rotation on breast imaging</p>
<p>Suggested Resources</p> <p>(A) Article (B) Book Chapter (D) Document (S) Slides (W) Widget - interactive powerpoint (V) Video</p>	<p>The BIRADS Atlas should be a go to resource for this section A Pictorial Review of Changes in BI-RADS 5th Edition BIRADS Widget (W)</p> <p>Mammography</p> <ol style="list-style-type: none"> 1. Calcifications <ol style="list-style-type: none"> Segmental breast calcifications (A) Breast calcifications – the focal group (A) Linear breast calcifications (A) Breast Calcifications Morphology interactive tool (W) Breast Calcification Distribution interactive tool (W) Calcifications at Digital Breast Tomosynthesis: Imaging Features and Biopsy Techniques (A) 2. Masses <ol style="list-style-type: none"> Breast Lesion Localization Mammography Widget (W) Cystic masses of the breast (A) 3. Asymmetries <ol style="list-style-type: none"> Developing Asymmetries at Mammography: A Multimodality Approach to Assessment and Management (A) Interpreting One-View Mammographic Findings: Minimizing Callbacks While Maximizing Cancer Detection (A) 4. Architectural distortion <ol style="list-style-type: none"> Tomosynthesis-detected Architectural Distortion: Management Algorithm with Radiologic-Pathologic Correlation (A) Architectural Distortion of the Breast (A) Spectrum of diseases presenting as architectural distortion on mammography: multimodality radiologic imaging with pathologic correlation (A) The postconservation breast: Part 1, Expected imaging findings (A) The postconservation breast: part 2, Imaging findings of tumor recurrence and other long-term sequelae. (A) 5. Diagnostic work-up <ol style="list-style-type: none"> BIRADS atlas Rolled Views Mammography Widget (W) 6. Miscellaneous <ol style="list-style-type: none"> ACR Practice Guideline for Screening and Diagnostic Mammography (D)

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- b. [Digital Breast Tomosynthesis in the Diagnostic Setting: Indications and Clinical Applications](#) (A)
- c. [Mammographic Signs of Systemic Disease](#) (A)
- d. [Breast Reconstruction: Review of Surgical Methods and Spectrum of Imaging Findings](#) (A)
- e. [Assessment and Management of Challenging BI-RADS Category 3 Mammographic Lesions](#) (A)
- f. [Utility of Breast MRI for Further Evaluation of Equivocal Findings on Digital Breast Tomosynthesis](#) (A)

Ultrasound

- 7. [Breast Masses on Ultrasound Widget](#) (W)
- 8. [ACR Practice Guideline for Breast Ultrasound](#) (D)
- 9. [US Evaluation of Abnormal Axillary Lymph Nodes](#) (A)
- 10. [Distinguishing Breast Skin Lesions from Superficial Breast Parenchymal Lesions: Diagnostic Criteria, Imaging Characteristics, and Pitfalls](#) (A)
- 11. [Breast Ultrasonography: State of the Art](#) (A)
- 12. [Artifacts and Pitfalls in Sonographic Imaging of the Breast](#) (A)
- 13. [Echogenic breast masses at US: to biopsy or not to biopsy?](#) (A)

Symptomatic breast

- 14. Palpable breast or axillary mass
 - a. [Imaging Management of Palpable Breast Abnormalities](#) (A)
 - b. [ACR Appropriateness Criteria Palpable Breast Masses](#) (A)
- 15. Pregnant Patient
 - a. [Breast Imaging of the Pregnant and Lactating Patient: Imaging Modalities and Pregnancy-Associated Breast Cancer](#) (A)
 - b. [Breast Imaging of the Pregnant and Lactating Patient: Physiologic Changes and Common Benign Entities](#) (A)
- 16. Breast pain
 - a. [ACR Appropriateness Criteria Breast Pain](#) (D)
- 17. Nipple discharge & changes
 - a. [ACR Appropriateness Criteria Nipple Discharge](#) (D)
 - b. [Nipple-Areolar Complex: Normal Anatomy and Benign and Malignant Processes](#) (D)
 - c. [Imaging approaches to diagnosis and management of common ductal abnormalities](#)
- 18. Inflamed breast
 - a. [What Radiologists Need to Know about Diagnosis and Treatment of Inflammatory Breast Cancer: A Multidisciplinary Approach](#) (A)
 - b. [Infections in the breast – common imaging presentations and mimics](#) (A)
 - c. [Uncommon infections in the breast](#) (A)
- 19. Pediatric patient
 - a. [Pediatric and Adolescent Breast Masses: A review of pathophysiology, imaging, diagnosis and treatment](#) (A)
- 20. [Breast Emergencies: Types, Imaging Features, and Management](#) (A)

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	<p>21. Emergency Breast Video Module (V) 22. Breast Masses in Men, Transgender, Pregnant & Post-partum powerpoint (S) 23. Nonpuerperal Mastitis and Subareolar Abscess of the Breast (A)</p> <p>Male Breast</p> <p>24. ACR Appropriateness Criteria Evaluation of the symptomatic male breast (A) 25. Male Breast - Presentation (S) 26. From the Radiologic Pathology Archives: Diseases of the Male Breast: Radiologic-Pathologic Correlation (A)</p> <p>Communication</p> <p>27. Communication in Breast Imaging: Lessons Learned at Diagnostic Evaluation (A)</p>
Mapping to Domains of Competence	<input checked="" type="checkbox"/> Patient Care <input checked="" type="checkbox"/> Medical Knowledge <input checked="" type="checkbox"/> Systems-Based Practice <input checked="" type="checkbox"/> Practice-Based Learning and Improvement <input checked="" type="checkbox"/> Professionalism <input checked="" type="checkbox"/> Interpersonal and Communication Skills
Competencies within each domain critical to entrustment decisions	PC1: Reporting PC2: Clinical Consultation PC3: Image Interpretation MK1: Diagnostic Knowledge MK2: Physics MK3: Protocol Selection and Contrast Agent Selection/Dosing MK4: Imaging Technology and Image Acquisition SBP1: Patient Safety SBP3: System Navigation for Patient-Centered Care SBP6: Radiation Safety SBP8: Informatics PBLI1: Evidenced-Based and Informed Practice PBLI2: Reflective Practice and Commitment to Professional Growth P1: Professional Behavior and Ethical Principles P2: Accountability/Conscientiousness ICS1: Patient- and Family-Centered Communication ICS2: Interprofessional and Team Communication ICS3: Communication with Health Care Systems
Required knowledge, skills, attitude and behavior, and experience	<p>Knowledge</p> <ul style="list-style-type: none"> • Knowledge of breast and axillary anatomy on imaging • Ability to synthesize Imaging findings on multiple modalities • Basic knowledge of indications for and technique of image-guided biopsies <p>Skill</p>

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	<ul style="list-style-type: none"> Recognize imaging findings of benign and malignant breast disease on mammography and ultrasound Request appropriate additional imaging, such as additional mammographic projections and ultrasound, as needed Generate concise and accurate reports of pertinent findings on imaging <p>Attitude and Behavior</p> <ul style="list-style-type: none"> Professional communication with patient, colleagues, and referring physicians Recognize limits and know when to ask colleague for assistance <p>Experience</p> <ul style="list-style-type: none"> Work up of a minimum of 20-50 abnormal screening mammograms and 10-30 symptomatic women
Assessment Information sources to assess progress and ground summative entrustment decision	<p>Knowledge Assessment: In process of creating</p> <p>Case-based discussion of a minimum of 30-80 total cases with gradually increasing independence</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 perform unsupervised (level 5) or supervise others (level 6) prior to graduation</p>
Expiration	1 year after graduation

*Modified from the work of Olle ten Cate

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