38-year-old woman who is 6 weeks postpartum presents with right breast swelling

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Patient Presentation

- **HPI**: 38-year-old female who was 6-weeks postpartum presented with swelling of the right breast. She was unable to breast feed on this side.
- **Family history**: Bladder cancer in MGM, Colon/rectal cancer in PGM, Melanoma in father, Prostate cancer in paternal uncle
- **OB/GYN history**: G2P2 at 6 weeks postpartum from vaginal delivery. First live birth at age 24
- **Medical History**: Heartburn, Celiac disease, fibromyalgia, exercise induced asthma
- **Surgical History**: Sling procedure of bladder neck, tonsillectomy, adenoidectomy
- **Physical exam**: Two masses were noted in the right breast in the upper outer quadrant and in the lower outer quadrant. There were enlarged right axillary lymph nodes
What Imaging Should We Order?
ACR Appropriateness Criteria for work up of palpable breast masses in younger women

**Variant 11:** Palpable breast mass. Female, 30 to 39 years of age, initial evaluation. (See Appendix 3 for additional steps in the workup of these patients.)

<table>
<thead>
<tr>
<th>Radiologic Procedure</th>
<th>Rating</th>
<th>Comments</th>
<th>RRL*</th>
</tr>
</thead>
<tbody>
<tr>
<td>US breast</td>
<td>8</td>
<td>If imaged initially with US, see Variants 7-10 for additional imaging.</td>
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<tr>
<td>Mammography diagnostic</td>
<td>8</td>
<td>If imaged initially with mammography, see Variants 2-5. See references [14,15].</td>
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<tr>
<td>Digital breast tomosynthesis diagnostic</td>
<td>8</td>
<td>See references [16-20].</td>
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<tr>
<td>MRI breast without and with IV contrast</td>
<td>2</td>
<td>See references [4,49].</td>
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<tr>
<td>MRI breast without IV contrast</td>
<td>1</td>
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<td>FDG-PEM</td>
<td>1</td>
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<td>Sestamibi MBI</td>
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<tr>
<td>Image-guided core biopsy breast</td>
<td>1</td>
<td>Varies</td>
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<td>Image-guided fine-needle aspiration breast</td>
<td>1</td>
<td>Varies</td>
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</tbody>
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**Rating Scale:** 1,2,3 Usually not appropriate; 4,5,6 May be appropriate; 7,8,9 Usually appropriate

*Relative Radiation Level
Findings (labeled)

- Right axillary Lymphadenopathy
- Skin thickening
- Trabecular thickening
- Asymmetry
- Skin thickening

Images showing mammograms with labeled findings.
Findings (unlabeled)
Findings (labeled)

Irregular shadowing mass with internal vascularity

Abnormal right Axillary lymph node
Final Dx:

Inflammatory Breast Cancer (IBC)
Inflammatory breast cancer

- Inflammatory breast cancer (IBC) is a rare and aggressive form of breast cancer characterized by diffuse dermatologic erythema and edema (peau d'orange)
- Accounts for 0.5 – 2% of invasive breast cancers in the United States
- Diagnosis is based upon characteristic clinical presentation as well as the presence of invasive carcinoma on breast core needle biopsy
- IBC is diagnosed at an earlier age compared to locally advanced breast cancer, median 59 vs. 66 years
IBC Imaging appearance

• Suspected IBC should be imaged with diagnostic mammogram on the affected side and screening mammogram on the contralateral side, with accompanying ultrasound of the breast and regional lymph nodes
• The typical mammographic appearance of IBC includes diffuse enlargement of the breast, stromal coarsening, diffuse increased density, skin thickening, and enlarged lymph nodes
• Ultrasound can identify the biopsy target and guide percutaneous core biopsy
IBC: Prognosis and treatment

- IBC is associated with poor prognosis and high risk of early recurrence
- The 5-year survival rate is 56% for regional IBC and 19% for IBC with distant metastases
- Standard treatment includes neoadjuvant chemotherapy, mastectomy, and postmastectomy radiation
References


