AMSER Case of the Month
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85M with palpable breast mass

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Patient Presentation

• **HPI:** 85 y/o man presenting for breast surgery consult after 6.5 x 5.3 cm soft tissue mass of left breast incidentally detected upon chest CTA
• **PMH:** HTN, HLD, COPD, renal insufficiency, PAD with chronic ulcerations of right lower leg
• **PSH:** Partial right foot amputation
• **FH:** Family history of breast cancer in sister
• **PE:** 6.5 cm soft, central mass of left breast. There is nipple distortion, but no erythema, skin changes, or discharge. No cervical, supraclavicular, infraclavicular, or axillary lymphadenopathy
• **Pertinent labs:** none
What Imaging Should We Order?
Select the applicable ACR Appropriateness Criteria

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Appropriateness Category</th>
<th>Relative Radiation Level</th>
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<tbody>
<tr>
<td>Mammography diagnostic</td>
<td>Usually Appropriate</td>
<td>☀️</td>
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<td>Digital breast tomosynthesis diagnostic</td>
<td>Usually Appropriate</td>
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<td>US breast</td>
<td>Usually Appropriate</td>
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<tr>
<td>MRI breast without and with IV contrast</td>
<td>Usually Not Appropriate</td>
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Male of any age with physical examination suspicious for breast cancer (suspicious palpable breast mass, axillary adenopathy, nipple discharge, or nipple retraction). Initial imaging.

These imaging modalities were ordered by the Breast Center physician.
Diagnostic Mammogram (unlabeled)
Diagnostic Mammogram (labeled)

6.6 x 6.1 x 7.7 cm macrolobulated high density mass in the retroareolar/periareolar left breast
A. There is a mixed echogenicity macrolobulated 6.9 x 4.5 x 6.2 cm mass in the retroareolar left breast, corresponding to the palpable abnormality (outlined by calipers).

B. The mass demonstrates minimal increased internal vascularity (yellow arrow).
Final Dx:

Invasive Mucinous Carcinoma (Colloid Adenocarcinoma)
Male Breast Cancer

DDx: Male breast cancer vs. gynecomastia vs. lipoma or cyst?

• Male breast cancer is uncommon and thus understudied, despite upward trend in incidence
  • In 2021, 2,650 new diagnoses of male breast cancer expected
• Alarm features for male breast cancer:
  • axillary adenopathy
  • nipple discharge
  • nipple retraction
  • clinically suspicious mass
Mucinous Carcinoma

- Mucinous (colloid) carcinoma is a relatively rare form of invasive breast cancer, representing only 1-4% of all cases.
- **Histological Features:**
  - Well-differentiated carcinoma cells in small clusters, surrounded by lakes of extracellular mucin.
- **Two General Types: Pure and Mixed**
  - Pure type: tumor tissue only, with extracellular mucin production.
  - Mixed type: tumor where 50-90% of the area is mucinous and also admixing with infiltrating ductal epithelial component.
- **Imaging Features:**
  - Most mucinous carcinomas appear on mammography as low-density, well-circumscribed round or oval masses. Calcifications are rare, but have been reported.
  - On ultrasound, the tumor appears isoechoic or hypoechoic to subcutaneous fat.
  - Homogeneity on sonography associated with the pure type of mucinous carcinoma, yielding a better prognosis.
Management: Male Breast Cancer

- Management of male breast cancer mirrors female breast cancer in many ways
- Mastectomy is currently the gold standard of care for male breast cancer
  - Increasing data suggests that breast-conserving surgery yields equivalent outcomes
- Genetic testing should be considered
- Chemotherapy recommended on the basis of female breast CA guidelines
References: