Suspicious Breast Calcifications

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Introduction

• Calcifications are a common finding on mammography, and BI-RADS Atlas divides into “typically benign” and “suspicious” categories
  • These divisions are based on morphology and distribution of the calcifications

• Suspicious calcifications are classified as BI-RADS 4
  • DCIS is one of the concerning diagnoses in the differential for suspicious calcifications, as DCIS often presents solely as mammography-detected calcs

• If suspicious calcifications are noted, they should be biopsied
  • Most commonly via stereotactic-guided biopsy
Suspicious Morphologies
Amorphous

- Small and indistinct
- Intermediate risk of malignancy (PPV 21%)

“Powdered Sugar”
Fine Pleomorphic

- Variable shape - less than 5 mm in size
- Intermediate risk of malignancy (PPV 29%)

“Table Sugar”
Coarse Heterogenous

- Similar to fine pleomorphic but larger than 5 mm
- Intermediate risk of malignancy (PPV 13%)

“Crushed Stone”

*Both fine pleomorphic and coarse heterogenous calcs can be seen here*
Fine Linear and Fine Linear Branching

- Thin, linear, branching
- Higher risk of malignancy due to ductal deposition (PPV 70%)
Distribution can help determine how suspicious calcifications are:

<table>
<thead>
<tr>
<th>Most suspicious</th>
<th>Less Suspicious</th>
<th>Least suspicious</th>
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<tbody>
<tr>
<td><strong>Linear</strong> = duct deposition</td>
<td><strong>Grouped</strong> = 5 calcs in 1 cm</td>
<td><strong>Diffuse</strong></td>
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<tr>
<td><strong>Segmental</strong> = duct or lobule deposition</td>
<td><strong>Regional</strong> = scattered across at least 2 cm</td>
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<tr>
<td><strong>Segmental</strong> fine pleomorphic and coarse heterogenous</td>
<td><strong>Grouped</strong> fine pleomorphic</td>
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</tbody>
</table>
And now let’s practice!
Q: Locate and Name the Calcifications
A: Locate and Name the Calcifications

Grouped fine pleomorphic in the left breast upper outer quadrant

(there are also benign vascular calcifications)
Q: Locate and Name the Calcifications
A: Locate and Name the Calcifications

Segmental fine linear and fine linear branching in the right breast upper outer quadrant.
Q: Locate and Name the Calcifications
A: Locate and Name the Calcifications

Also, note small mass UOQ (with the calcs) and left axillary lymph node.

Regional fine linear branching in the left breast upper outer quadrant.
Q: Locate and Name the Calcifications
A: Locate and Name the Calcifications

Multiple coarse heterogeneous scattered about right breast


