### Breast Cancer Screening

**Variant 1:** Breast cancer screening. Female. Average-risk, with less than 15% lifetime risk of breast cancer.

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**References**

| Study Quality | 15 (24316152) | 12 (23623721) | 28 (25188431) | 16 (25058084) | 17 (24918774) | 31 (23901124) | 18 (24746887) | 33 (24896197) | 19 (24121712) | 29 (25247407) | 20 (25313245) | 32 (23969151) | 21 (23169790) | 22 (24450665) | 30 (23701081) | 23 (25107868) | 24 (23553585) | 25 (23297332) |
|--------------------------|----------------|-------------|--------------|------------|--------|--------|----------------|-----------------|-------------|-------------|--------------|--------------|-------------|-------------|--------------|----------------|-------------|-------------|--------------|
|                          |                |             |              |            |        |        | 1              |                 | 3            | 1            | 3            | 3            | 3           | 1           | 3            | 3              | 1           | 3           | 1            |

**Study Quality:**

- 1: Usually appropriate
- 2: Strong
- 3: Usually inadequate
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Digital breast tomosynthesis screening is usually appropriate. lounge 0.1-1 mSv.
<p>| References | Study Quality | O 0 mSv | O 0 mSv [ped] | 5 | 5 | 1 | 1 | 0 | 5 | 9 | 1 | 0 | 0 | 0 |
|------------|---------------|---------|---------------|---|---|---|---|---|---|---|---|---|---|---|---|
| US breast  | May be        | Strong  |               |   |   |   |   |   |   |   |   |   |   |   |   |
| 10 (20129267) | 4            |        |               |   |   |   |   |   |   |   |   |   |   |   |   |
| 37 (25763719) | 4            |        |               |   |   |   |   |   |   |   |   |   |   |   |   |
| 38 (25329763) | 3            |        |               |   |   |   |   |   |   |   |   |   |   |   |   |
| 39 (23980217) | 3            |        |               |   |   |   |   |   |   |   |   |   |   |   |   |
| 40 (23116728) | 2            |        |               |   |   |   |   |   |   |   |   |   |   |   |   |
| 41 (22723501) | 2            |        |               |   |   |   |   |   |   |   |   |   |   |   |   |
| 42 (23240937) | 2            |        |               |   |   |   |   |   |   |   |   |   |   |   |   |
| 43 (23750571) | 4            |        |               |   |   |   |   |   |   |   |   |   |   |   |   |</p>
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References
- 45 (21045179)
- 44 (25615744)
- 46 (25615745)

References
- 45 (21045179)
- 44 (25615744)
- 46 (25615745)

References
- 15 (24316152)
- 12 (23623721)
- 28 (25188431)
- 16 (25058084)
- 17 (24918774)

Variant 2: Breast cancer screening. Female. Intermediate-risk, with personal history of breast cancer, lobular neoplasia, atypical ductal hyperplasia, or 15% to 20% lifetime risk of breast cancer.

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References
- 15 (24316152)
- 12 (23623721)
- 28 (25188431)
- 16 (25058084)
- 17 (24918774)
Digital breast tomosynthesis screening is usually appropriate for breast cancer screening. The radiation dose is typically 0.1-1 mSv, which is relatively low. The use of digital breast tomosynthesis is generally well-accepted among radiologists and breast imaging experts. However, the cost-effectiveness and benefits need to be carefully evaluated in each clinical setting. Further research is needed to determine the optimal use of this technology in various populations and settings.
| MRI breast without and with IV contrast | May be appropriate | Limited | O 0 mSv | O 0 mSv [ped] | 6 | 6 | 0 | 0 | 1 | 0 | 4 | 9 | 2 | 1 | 0 |
|----------------------------------------|-------------------|---------|---------|-------------|----|----|----|----|----|----|----|----|----|----|
| References                             | Study Quality     | 53 (20651211) | 3 |
| 51 (21900617)                          | 4 |
| 50 (21900618)                          | 3 |
| 52 (26744477)                          | 3 |
| 47 (17392385)                          | 4 |

<p>| US breast                             | May be appropriate | Strong | O 0 mSv | O 0 mSv [ped] | 6 | 6 | 0 | 0 | 0 | 2 | 5 | 10 | 0 | 0 | 0 |
|---------------------------------------|-------------------|--------|---------|-------------|----|----|----|----|----|----|----|----|----|----|
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**Variant 3:** Breast cancer screening. Female. High-risk, with a BRCA gene mutation and their untested first-degree relatives, women with a history of chest irradiation between 10 to 30 years of age, women with 20% or greater lifetime risk of breast cancer.
<p>| MRI breast without and with IV contrast | Usually appropriate | Strong | O 0 mSv | O 0 mSv [ped] | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|----------------------------------------|---------------------|--------|---------|--------------|---|---|---|---|---|---|---|---|---|---|
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Appendix Key
A more complete discussion of the items presented below can be found by accessing the supporting documents at the designated hyperlinks.

Appropriateness Category: The panel's recommendation for a procedure based on the assessment of the risks and benefits of performing the procedure for the specified clinical scenario.

SOE: Strength of Evidence. The assessment of the amount and quality of evidence found in the peer reviewed medical literature for an appropriateness recommendation.

- References: The citation number and PMID for the reference(s) associated with the recommendation.
- Study Quality: The assessment of the quality of an individual reference based on the number of study quality elements described in the reference.

RRL: Relative Radiation Level. A population based assessment of the amount of radiation a typical patient may be exposed to during the specified procedure.

Rating: The final rating (1-9 scale) for the procedure as determined by the panel during rating rounds.

Median: The median rating (1-9 scale) for the procedure as determined by the panel during rating rounds.

Final tabulations: A histogram showing the number of panel members who rated the procedure as noted in the column heading (ie, 1, 2, 3, etc.).

Additional supporting documents about the AC methodology and processes can be found at www.acr.org/ac.