American College of Radiology ACR Appropriateness Criteria®

Male Breast Cancer Screening

Variant 1: Adult male. Breast cancer screening. Higher-than-average risk.

| | Appropriateness | 207 | | | | | Final Tabulations | | | | | | | | | | | |
|--|-------------------------|---------------|-------------|------------------|---------|--------|-------------------|---|---|---|---|---|---|---|---|--|--|--|
| Procedure | Category | SOE | Adults RRL | Peds RRL | Rating | Median | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 1 | 9 | | | |
| Mammography screening | Usually appropriate | Limited | �� 0.1-1mSv | / | 7 | 7 | 0 | 0 | 0 | 0 | 3 | 5 | 7 | 1 | 2 | | | |
| | | References | | Study | Quality | | | | | | | | | | | | | |
| | | 3 (32058842) | | | 4 | | | | | | | | | | | | | |
| | | 20 (-3197516) | | | 4 | | | | | | | | | | | | | |
| | | 12 (31526252) |) | | 3 | | | | | | | | | | | | | |
| | | 19 (32828665) |) | | | | | | | | | | | | | | | |
| | | 15 (-3197512) | | | 4 | | | | | | | | | | | | | |
| Digital breast tomosynthesis screening | Usually appropriate | Limited | �� 0.1-1mSv | / | 7 | 7 | 0 | 0 | 0 | 0 | 2 | 5 | 8 | 1 | 2 | | | |
| | | References | | Study | | | | | | | | | | | | | | |
| | | 19 (32828665) |) | | | | | | | | | | | | | | | |
| | | 12 (31526252) |) | | | | | | | | | | | | | | | |
| | | 20 (-3197516) | | 4 4 | | | | | | | | | | | | | | |
| | | 15 (-3197512) | | | | | | | | | | | | | | | | |
| | | 3 (32058842) | | | 4 | | | 1 | | | | | | | | | | |
| MRI breast without IV contrast | Usually not appropriate | Limited | O 0 mSv | O 0 mSv [ped] | 1 | 1 | 15 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | | References | | Study Quality | | | | | | | | | | | | | | |
| | | 3 (32058842) | | · | 4 | | | | | | | | | | | | | |

| | | | O 0 mSv | v | O 0 mSv [ped] | 1 | 1 | 10 | 4 | 1 | 1 | 2 | 0 | 0 | 0 | 0 |
|---|--|---|--|---|---|--|--|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | References | | | Study Quality | | | | | • | • | | • | | • | | |
| | | - | | 4 | | | | | | | | | | | | |
| | | Limited | O 0 mSv | | O 0 mSv [ped] | 1 | 1 | 12 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 0 |
| | | References Study Quality | | | | | | | | | | | | | | |
| | | 12 (31526252) | | | 3 | | | | | | | | | | | |
| | | Expert Consensus | ��� 1-10 mSv | | | 1 | 1 | 16 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | Expert Consensus | �� 0.1-1mSv | | | 1 | 1 | 11 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 0 |
| | | Limited | O 0 mSv | v | O 0 mSv [ped] | 1 | 1 | 11 | 3 | 1 | 1 | 2 | 0 | 0 | 0 | 0 |
| • | | References | | | Study | Quality | | | | | | | | | | |
| | | 3 (32058842) | | | | 4 | | | | | | | | | | |
| | | Limited | Limited O 0 mSv | | O 0 mSv [ped] | 1 | 1 | 15 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | References | | | Study Quality | | | • | | | | | | | | |
| | | 3 (32058842) | | | · · · · · · · · · · · · · · · · · · · | 4 | | | | | | | | | | |
| | Usuall; approp Usuall; approp Usuall; approp Usuall; approp | Usually not appropriate Usually not appropriate | appropriate References 3 (32058842) Usually not appropriate References 12 (31526252) Usually not appropriate Usually not appropriate Usually not appropriate References 12 (31526252) Limited Expert Consensus Usually not appropriate References 3 (32058842) Usually not appropriate References References References | References 3 (32058842) Usually not appropriate References 12 (31526252) Usually not appropriate Consensus Expert Consensus Usually not appropriate Limited O 0 mSv Expert Consensus Expert Consensus O 0 mSv A consensus Expert Consensus Usually not appropriate Limited O 0 mSv References 3 (32058842) Usually not appropriate References References References References | References 3 (32058842) Usually not appropriate References 12 (31526252) Usually not appropriate Expert Consensus Usually not appropriate Usually not appropriate Limited O 0 mSv Expert Consensus Usually not appropriate Limited O 0 mSv Expert Consensus Usually not appropriate Limited O 0 mSv References 3 (32058842) Usually not appropriate Limited O 0 mSv References References 3 (32058842) | References 3 (32058842) Usually not appropriate References References Study 3 (32058842) Usually not appropriate Expert Consensus Usually not appropriate Limited O 0 mSv [ped] References Study 12 (31526252) Usually not appropriate Expert Consensus O 0 mSv O 0 mSv [ped] References Study Study O 0 mSv [ped] References Study Study | References 3 (32058842) Usually not appropriate References 1 | References Study Quality |

Variant 2: Adult male. Breast cancer screening. Average risk.

| Procedure | Appropriateness | SOE | Adults RRL | Peds RRL | Rating | Median | Final Tabulations | | | | | | | | | | |
|-----------------------|-------------------------|---------|-------------|----------|--------|--------|-------------------|---|---|---|---|---|---|---|---|--|--|
| | Category | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | |
| Mammography screening | Usually not appropriate | Limited | �� 0.1-1mSv | | 1 | 1 | 16 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | |

| References | Study Quality |
|---------------|---------------|
| 21 (-3197518) | 4 |

| MRI breast without IV contrast | Usuall approp | | | | O 0 mSv [ped] | 1 | 1 | 17 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|---|------------------|---------------|--------------------------|------------|------------------|---------|---|----|---|---|---|---|---|---|---|---|
| | | | References | | Study Quality | | | | | | | | | | | |
| | | | 21 (-3197518) 4 | | | | | | | | | | | | | |
| MRI breast without and with IV contrast | Usuall approp | | Expert Consensus O 0 mSv | | O 0 mSv [ped] | 1 | 1 | 17 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| US breast | Usuall approp | | | | O 0 mSv [ped] | 1 | 1 | 17 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | References | | Study | Quality | | | | | | | | | | |
| | | | 21 (-3197518) | | | | | | | | | | | | | |
| Digital breast tomosynthesis screening | Usuall approp | | Limited | �� 0.1-1mS | v | 1 | 1 | 16 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | References | | Study | Quality | | • | | | | | | | | |
| | | | 21 (-3197518) | | | 4 | | | | | | | | | | |
| Sestamibi MBI | Usuall approp | | not Expert ��� 1-10 | | | 1 | 1 | 17 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mammography with IV contrast | Usuall approp | | Limited | �� 0.1-1mS | v | 1 | 1 | 17 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | References | | Study Quality | | | • | | • | • | • | | | | |
| | | | 21 (-3197518) | | | 4 | | | | | | | | | | |
| MRI breast without and with IV contrast abbreviated | Usuall approp | | Limited | O 0 mSv | O 0 mSv [ped] | 1 | 1 | 17 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | References | | Study | Quality | | | | | | | | | | |
| | | | 21 (-3197518) | | | 4 | | | | | | | | | | |
| MRI breast without IV contrast abbreviated | Usuall approp | | Limited | O 0 mSv | O 0 mSv [ped] | 1 | 1 | 17 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | References | | Study | Quality | | | | | | | | | | |
| | | 21 (-3197518) | | | 4 | | | | | | | | | | | |

Variant 3: Adult male, younger than 25 years of age. Breast cancer screening. Any risk.

| n , | Appropriateness Category | SOE | A dulta DDI | Peds RRL | Dating | 3.6.11 | | | F | inal ' | nal Tabulations | | | | | | | | | | | |
|---|-----------------------------|---------------------|-----------------|------------------|--------|--------|----|---|---|--------|-----------------|---|---|---|---|--|--|--|--|--|--|--|
| Procedure | | | Adults RRL | Peds RRL | Rating | Median | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | | | | | | |
| Mammography screening | Usually not appropriate | Expert Consensus | �� 0.1-1mSv | | 1 | 1 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| MRI breast without IV contrast | Usually not appropriate | Expert Consensus | O 0 mSv | O 0 mSv [ped] | 1 | 1 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| MRI breast without and with IV contrast | Usually not appropriate | Expert Consensus | O 0 mSv | O 0 mSv [ped] | 1 | 1 | 17 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| US breast | Usually not appropriate | Expert Consensus | O 0 mSv | O 0 mSv [ped] | 1 | 1 | 17 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Digital breast tomosynthesis screening | Usually not appropriate | Expert Consensus | �� 0.1-1mSv | | 1 | 1 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Sestamibi MBI | Usually not appropriate | Expert Consensus | ��� 1-10 mSv | | 1 | 1 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Mammography with IV contrast | Usually not appropriate | Expert Consensus | �� 0.1-1mSv | | 1 | 1 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| MRI breast without and with IV contrast abbreviated | Usually not appropriate | Expert Consensus | O 0 mSv | O 0 mSv [ped] | 1 | 1 | 17 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| MRI breast without IV contrast abbreviated | Usually not appropriate | Expert Consensus | O 0 mSv | O 0 mSv [ped] | 1 | 1 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |

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.