





Sestamibi MBI	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv		1	1	15	1	0	0	0	0	0	0	0	0	0	0	0

**Variant 2: Breast cancer screening during pregnancy. Age younger than 30 at high risk. Initial imaging.**

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations													
							1	2	3	4	5	6	7	8	9					
Mammography screening	Usually appropriate	Limited	☼☼ 0.1-1mSv		7	7	0	0	0	0	2	0	8	2	4					

References	Study Quality
28 (21343518)	3
44 (-3112876)	4
7 (24485752)	3
24 (21382187)	4
25 (21782123)	4
26 (12751860)	3
27 (8134581)	3
43 (22403117)	4
45 (9653462)	4

Digital breast tomosynthesis screening	Usually appropriate	Limited	☼☼ 0.1-1mSv		7	7	1	0	0	0	3	3	3	3	3					
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References	Study Quality
28 (21343518)	3
44 (-3112876)	4
7 (24485752)	3
24 (21382187)	4
25 (21782123)	4
26 (12751860)	3



25 (21782123)	4
26 (12751860)	3
27 (8134581)	3
43 (22403117)	4
45 (9653462)	4

Digital breast tomosynthesis screening	Usually appropriate	Limited	☼☼ 0.1-1mSv		7	7	1	0	0	0	1	4	3	3	4
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References	Study Quality
28 (21343518)	3
44 (-3112876)	4
7 (24485752)	3
24 (21382187)	4
25 (21782123)	4
26 (12751860)	3
27 (8134581)	3
43 (22403117)	4
45 (9653462)	4

US breast	May be appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	5	5	0	1	1	2	10	2	0	0	0
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References	Study Quality
10 (23345354)	4
9 (18180221)	4

MRI breast without IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	1	1	16	0	0	0	0	0	0	0	0
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References	Study Quality
33 (-3132600)	4

MRI breast without and with IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	1	1	16	0	0	0	0	0	0	0	0
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References	Study Quality
33 (-3132600)	4

Sestamibi MBI	Usually not appropriate	Expert Consensus	☹☹☹ 1-10 mSv		1	1	16	0	0	0	0	0	0	0	0
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**Variant 4: Breast cancer screening during pregnancy. Age 40 years or older, any risk level. Initial imaging.**

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Mammography screening	Usually appropriate	Limited	☹☹ 0.1-1mSv		9	9	0	0	0	0	1	0	1	3	11

References	Study Quality
28 (21343518)	3
44 (-3112876)	4
7 (24485752)	3
24 (21382187)	4
25 (21782123)	4
26 (12751860)	3
27 (8134581)	3
43 (22403117)	4
45 (9653462)	4

Digital breast tomosynthesis screening	Usually appropriate	Limited	☹☹ 0.1-1mSv		9	9	0	0	0	0	1	0	0	2	13
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References	Study Quality
28 (21343518)	3
44 (-3112876)	4
7 (24485752)	3
24 (21382187)	4
25 (21782123)	4
26 (12751860)	3
27 (8134581)	3
43 (22403117)	4



Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations												
							1	2	3	4	5	6	7	8	9				
	appropriate			[ped]															

References	Study Quality
10 (23345354)	4
9 (18180221)	4
44 (-3112876)	4
7 (24485752)	3
23 (15969981)	4
24 (21382187)	4
25 (21782123)	4
26 (12751860)	3
46 (16311748)	3
47 (16502483)	4
36 (28473077)	4

Mammography diagnostic	May be appropriate	Limited	☢☢ 0.1-1mSv		5	5	0	0	0	0	10	4	1	1	0
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References	Study Quality
28 (21343518)	3
44 (-3112876)	4
7 (24485752)	3
24 (21382187)	4
25 (21782123)	4
26 (12751860)	3
27 (8134581)	3
43 (22403117)	4

Digital breast tomosynthesis diagnostic	May be appropriate	Limited	☢☢ 0.1-1mSv		5	5	0	0	0	0	9	5	2	0	0
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References	Study Quality
28 (21343518)	3



44 (-3112876)	4
7 (24485752)	3
24 (21382187)	4
25 (21782123)	4
26 (12751860)	3
27 (8134581)	3
43 (22403117)	4

Image-guided core biopsy breast	Usually not appropriate	Expert Consensus	Varies		1	1	12	1	1	0	0	2	0	0	0
Image-guided fine needle aspiration breast	Usually not appropriate	Expert Consensus	Varies		1	1	12	1	2	1	0	0	0	0	0
MRI breast without IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	1	1	15	0	0	0	1	0	0	0	0
		References		Study Quality											
		33 (-3132600)		4											
MRI breast without and with IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	1	1	16	0	0	0	0	0	0	0	0
		References		Study Quality											
		33 (-3132600)		4											
Sestamibi MBI	Usually not appropriate	Expert Consensus	⊕⊕⊕ 1-10 mSv		1	1	15	0	0	0	1	0	0	0	0

**Variant 6: Clinically suspicious nipple discharge during pregnancy. Initial imaging.**

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
US breast	Usually appropriate	Limited	0 0 mSv	0 0 mSv [ped]	9	9	0	0	0	0	0	1	0	3	12
		References		Study Quality											
		48 (-3112883)		4											

Mammography diagnostic	Usually appropriate	Limited	☼☼ 0.1-1mSv		7	7	0	0	0	0	3	4	3	4	2	
		References	Study Quality													
		28 (21343518)	3													
		44 (-3112876)	4													
		7 (24485752)	3													
		24 (21382187)	4													
		25 (21782123)	4													
		43 (22403117)	4													
Digital breast tomosynthesis diagnostic	Usually appropriate	Limited	☼☼ 0.1-1mSv		7	7	0	0	0	0	3	4	4	3	2	
		References	Study Quality													
		28 (21343518)	3													
		44 (-3112876)	4													
		7 (24485752)	3													
		24 (21382187)	4													
		25 (21782123)	4													
		43 (22403117)	4													
MRI breast without IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	1	1	16	0	0	0	0	0	0	0	0	
		References	Study Quality													
		33 (-3132600)	4													
MRI breast without and with IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	1	1	16	0	0	0	0	0	0	0	0	
		References	Study Quality													
		33 (-3132600)	4													
Sestamibi MBI	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv		1	1	16	0	0	0	0	0	0	0	0	

**Variant 7: Locoregional staging of newly diagnosed breast cancer during pregnancy. Initial imaging.**



MRI breast without and with IV contrast	Usually not appropriate	Limited	0 mSv	0 mSv [ped]	1	1	15	0	1	0	0	0	0	0	0
		References		Study Quality											
		33 (-3132600)		4											
		19 (28609163)		2											
Sestamibi MBI	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv		1	1	15	0	1	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](http://www.acr.org/ac).