

American College of Radiology ACR Appropriateness Criteria®

Transgender Breast Cancer Screening

Variant 1: Breast cancer screening. Transfeminine (male-to-female) patient, 40 years of age or older with past or current hormone use equal to or greater than 5 years. Average-risk patient.

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

References	Study Quality
2 (31088823)	4
21 (25994431)	4
1 (25428790)	4
3 (24010586)	4
18 (21266549)	4
10 (29392096)	4
19 (9718051)	2
20 (12117397)	2

Digital breast tomosynthesis screening	May be appropriate	Strong	☼☼ 0.1-1mSv		6	6	0	0	0	2	7	5	4	0	1
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References	Study Quality
2 (31088823)	4
21 (25994431)	4
1 (25428790)	4
3 (24010586)	4
18 (21266549)	4
10 (29392096)	4

		19 (9718051)		2											
		20 (12117397)		2											
MRI breast without IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	1	1	15	0	1	1	1	0	0	0	1
		References		Study Quality											
		17 (29724416)		4											
MRI breast without and with IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	1	1	10	1	2	1	4	0	0	0	1
		References		Study Quality											
		4 (25415740)		4											
		10 (29392096)		4											
US breast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	1	1	12	1	3	1	0	1	0	0	1
		References		Study Quality											
		11 (19359116)		3											

Variant 2: Breast cancer screening. Transfeminine (male-to-female) patient, 25 to 30 years of age or older with past or current hormone use equal to or greater than 5 years. Higher-than-average risk (patient with personal history of breast cancer or chest irradiation at 10 to 30 years of age, patient with genetic predisposition to breast cancer, patient with family history of breast or ovarian cancer, and untested patient with first-degree relative with genetic predisposition to breast cancer).

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	Strong	☢☢ 0.1-1mSv		7	7	0	0	0	0	1	1	13	1	3
		References	Study Quality												
		25 (29101979)	4												
		2 (31088823)	4												
		1 (25428790)	4												
		24 (25042481)	4												
		3 (24010586)	4												
		18 (21266549)	4												

			10 (29392096)	☢☢ 0.1-1mSv		7	7	0	0	0	0	1	3	12	0	3
			19 (9718051)													
			20 (12117397)													
			22 (31526252)													
Digital breast tomosynthesis screening	Usually appropriate	Strong														
			References	Study Quality												
			25 (29101979)	4												
			2 (31088823)	4												
			1 (25428790)	4												
			24 (25042481)	4												
			3 (24010586)	4												
			18 (21266549)	4												
			19 (9718051)	2												
			20 (12117397)	2												
			22 (31526252)	3												
MRI breast without and with IV contrast	Usually not appropriate	Limited		0 0 mSv	0 0 mSv [ped]	3	3	4	3	8	1	1	1	1	0	0
			References	Study Quality												
			4 (25415740)	4												
			10 (29392096)	4												
MRI breast without IV contrast	Usually not appropriate	Limited		0 0 mSv	0 0 mSv [ped]	1	1	17	2	0	0	0	0	0	0	0
			References	Study Quality												
			17 (29724416)	4												
US breast	Usually not appropriate	Expert Consensus		0 0 mSv	0 0 mSv [ped]	1	1	16	3	0	0	0	0	0	0	0

Variant 3: Breast cancer screening. Transfeminine (male-to-female) patient with no hormone use (or hormone use less than 5 years) at any age. Average-risk patient.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Mammography screening	Usually not appropriate	Limited	☢☢ 0.1-1mSv		1	1	14	2	1	0	0	0	0	0	2
		References	Study Quality												
		1 (25428790)	4												
		26 (22393212)	4												
MRI breast without IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	1	1	14	2	1	1	0	0	0	0	1
		References	Study Quality												
		17 (29724416)	4												
MRI breast without and with IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	1	1	15	2	1	0	0	0	0	0	1
US breast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	1	1	14	3	0	0	0	1	0	0	1
Digital breast tomosynthesis screening	Usually not appropriate	Limited	☢☢ 0.1-1mSv		1	1	14	2	1	0	0	0	0	0	2
		References	Study Quality												
		1 (25428790)	4												
		26 (22393212)	4												

Variant 4: Breast cancer screening. Transfeminine (male-to-female) patient, 25 to 30 years of age or older with no hormone use (or hormone use less than 5 years). Higher-than-average risk (patient with personal history of breast cancer or chest irradiation at 10 to 30 years of age, patient with genetic predisposition to breast cancer, patient with family history of breast or ovarian cancer, and untested patient with first-degree relative with genetic predisposition to breast cancer).

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Mammography screening	May be appropriate	Limited	☢☢ 0.1-1mSv		5	5	0	1	0	1	11	3	3	0	0
		References		Study Quality											

			21 (25994431)		4													
			22 (31526252)		3													
			23 (31280425)		3													
Digital breast tomosynthesis screening	May be appropriate	Limited	☢☢☢ 0.1-1mSv		5	5	0	1	0	1	12	2	3	0	0			
		References		Study Quality														
		21 (25994431)		4														
		22 (31526252)		3														
		23 (31280425)		3														
MRI breast without and with IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	2	2	5	8	1	1	3	0	1	0	0			
		References		Study Quality														
		4 (25415740)		4														
		17 (29724416)		4														
		10 (29392096)		4														
MRI breast without IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	1	1	18	0	1	0	0	0	0	0	0			
		References		Study Quality														
		17 (29724416)		4														
US breast	Usually not appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	1	1	17	1	0	0	1	0	0	0	0			

Variant 5: Breast cancer screening. Transmasculine (female-to-male) patient with bilateral mastectomies (“top surgery”) at any age and any risk.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Mammography screening	Usually not appropriate	Expert Consensus	☼☼ 0.1-1mSv		1	1	15	2	1	0	0	0	0	0	1
MRI breast without IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	1	1	16	1	1	0	0	0	0	0	1

			29 (23750571)	4															
			25 (29101979)	4															
MRI breast without IV contrast	Usually not appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	1	1	14	2	1	1	0	0	0	0	0	0	1		
MRI breast without and with IV contrast	Usually not appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	1	1	12	1	3	1	1	0	0	0	0	0	1		

Variant 7: Breast cancer screening. Transmasculine (female-to-male) patient with reduction mammoplasty or no chest surgery, 30 years of age or older. Intermediate risk (patient with personal history of breast cancer, lobular neoplasia, atypical ductal hyperplasia, or 15% to 20% lifetime risk of breast cancer).

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	1	0	0	0	0	0	1	6	11		

References	Study Quality
35 (28648873)	4
25 (29101979)	4

Digital breast tomosynthesis screening	Usually appropriate	Limited	☼☼ 0.1-1mSv		9	9	0	1	0	0	0	1	2	5	10		
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References	Study Quality
35 (28648873)	4
25 (29101979)	4

MRI breast without and with IV contrast	May be appropriate	Limited	0 0 mSv	0 0 mSv [ped]	5	5	0	1	0	1	12	3	1	1	0		
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References	Study Quality
38 (20651211)	3
37 (21900617)	4
36 (21900618)	3
39 (26744477)	3
25 (29101979)	4

US breast	May be appropriate	Strong	0 0 mSv	0 0 mSv [ped]	5	5	0	0	1	2	13	2	1	0	0
		References		Study Quality											
		40 (18477782)		1											
		41 (22474203)		1											
		25 (29101979)		4											
MRI breast without IV contrast	Usually not appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	1	1	15	1	1	0	1	0	0	0	1

Variant 8: Breast cancer screening. Transmasculine (female-to-male) patient with reduction mammoplasty or no chest surgery, 25 to 30 years of age or older. High risk (patient with genetic predisposition to breast cancer or untested patient with a first-degree relative with genetic predisposition to breast cancer, patient with a history of chest irradiation between 10 to 30 years of age, patient with 20% or greater lifetime risk of breast cancer).

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	1	0	1	0	0	0	2	4	11
		References		Study Quality											
		35 (28648873)		4											
		42 (17392385)		4											
		25 (29101979)		4											
Digital breast tomosynthesis screening	Usually appropriate	Limited	☢☢ 0.1-1mSv		9	9	1	0	1	0	0	1	2	4	10
		References		Study Quality											
		35 (28648873)		4											
		42 (17392385)		4											
		25 (29101979)		4											
MRI breast without and with IV contrast	Usually appropriate	Strong	0 0 mSv	0 0 mSv [ped]	8	8	1	0	0	0	0	1	2	7	8
		References		Study Quality											
		49 (17244718)		2											

		43 (17317184)	3												
		44 (16615112)	4												
		46 (16293877)	2												
		47 (15910949)	2												
		48 (24789418)	3												
		45 (20177029)	1												
		50 (19884532)	1												
		25 (29101979)	4												
US breast	May be appropriate	Strong	O 0 mSv	O 0 mSv [ped]	5	5	1	0	0	2	11	2	1	1	1
		References	Study Quality												
		40 (18477782)	1												
		41 (22474203)	1												
		25 (29101979)	4												
MRI breast without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	15	1	1	0	1	0	0	0	1

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.