American College of Radiology
ACR Appropriateness Criteria®

Palpable Breast Masses

Variant 1: Adult female, 40 years of age or older. Palpable breast mass. Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Mammography diagnostic	Usually appropriate	Limited	☢☢ 0.1-1mSv		9	9	0	0	0	0	0	0	2	2	13

References	Study Quality
19 (17929256)	4
20 (12636326)	3
18 (17350262)	3
21 (27081707)	3
22 (32023120)	3

Digital breast tomosynthesis diagnostic	Usually appropriate	Strong	☢☢ 0.1-1mSv		9	9	0	0	0	0	0	0	0	1	16

References	Study Quality
17 (22593120)	2
14 (24475859)	3
12 (21998048)	2
16 (26133221)	2
11 (23345348)	2
13 (23255766)	3
15 (29174225)	3

US breast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	5	5	0	0	0	2	9	2	1	3	0

References	Study Quality
2 (25341156)	4
7 (11274555)	3
8 (12355002)	3
9 (12418762)	3
26 (11348373)	3
21 (27081707)	3

Image-guided core biopsy breast	Usually not appropriate	Expert Consensus	Varies	Varies	1	1	14	0	1	0	2	0	0	0	0
Image-guided fine needle aspiration breast	Usually not appropriate	Expert Consensus	Varies	Varies	1	1	15	0	0	0	2	0	0	0	0
Mammography screening	Usually not appropriate	Expert Consensus	☢☢ 0.1-1mSv		1	1	13	1	2	0	0	1	0	0	0
MRI breast without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	14	1	2	0	0	0	0	0	0

References	Study Quality
2 (25341156)	4
25 (21477168)	3
24 (23046046)	3
23 (28754486)	3

MRI breast without and with IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	11	1	3	1	0	0	1	0	0

References	Study Quality
2 (25341156)	4
25 (21477168)	3
24 (23046046)	3
23 (28754486)	3

FDG-PET breast dedicated	Usually not appropriate	Limited	☢☢☢ 1-10 mSv		1	1	14	2	1	0	0	0	0	0	0

References	Study Quality

		2 (25341156)		4											
Digital breast tomosynthesis screening	Usually not appropriate	Expert Consensus	☢☢ 0.1-1mSv		1	1	13	1	2	0	0	1	0	0	0
Sestamibi MBI	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv		1	1	16	0	1	0	0	0	0	0	0

Variant 2: Adult female, 40 years of age or older. Palpable breast mass. Mammography findings are suspicious or highly suggestive of malignancy (BI-RADS 4 or 5). Next imaging study.

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	O 0 mSv	O 0 mSv [ped]	9	9	0	0	0	0	0	0	1	2	14
		References		Study Quality											
		34 (12034957)		3											
		33 (16915997)		4											
		35 (-3098655)		4											
Image-guided core biopsy breast	Usually not appropriate	Limited	Varies	Varies	1	1	13	1	2	0	0	0	0	0	1
		References		Study Quality											
		27 (17924407)		3											
		30 (-3098656)		4											
		28 (25386875)		3											
		29 (23252555)		4											
Image-guided fine needle aspiration breast	Usually not appropriate	Limited	Varies	Varies	1	1	14	3	0	0	0	0	0	0	0
		References		Study Quality											
		27 (17924407)		3											
		31 (27160231)		4											

MRI breast without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	13	0	4	0	0	0	0	0	0

References	Study Quality
2 (25341156)	4
25 (21477168)	3
32 (-3098654)	4
24 (23046046)	3
23 (28754486)	3

MRI breast without and with IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	10	2	3	0	1	0	1	0	0

References	Study Quality
2 (25341156)	4
25 (21477168)	3
32 (-3098654)	4
24 (23046046)	3
23 (28754486)	3

FDG-PET breast dedicated	Usually not appropriate	Limited	☢☢☢ 1-10 mSv		1	1	13	1	2	0	1	0	0	0	0

References	Study Quality
2 (25341156)	4

Sestamibi MBI	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv		1	1	14	2	1	0	0	0	0	0	0

Variant 3: Adult female, 40 years of age or older. Palpable breast mass. Diagnostic mammography, DBT, and US findings are probably benign (BI-RADS 3). Next imaging study.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Image-guided core biopsy breast	Usually not appropriate	Limited	Varies	Varies	3	3	2	2	7	0	5	1	0	0	0

References	Study Quality
27 (17924407)	3
36 (4228709)	4
30 (-3098656)	4
37 (-3098658)	4

Image-guided fine needle aspiration breast	Usually not appropriate	Limited	Varies	Varies	2	2	7	2	5	0	2	1	0	0	0

References	Study Quality
27 (17924407)	3
36 (4228709)	4
30 (-3098656)	4
37 (-3098658)	4
31 (27160231)	4

MRI breast without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	15	1	1	0	0	0	0	0	0

References	Study Quality
2 (25341156)	4
25 (21477168)	3
24 (23046046)	3
23 (28754486)	3

MRI breast without and with IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	11	2	1	1	1	1	0	0	0

References	Study Quality
2 (25341156)	4
25 (21477168)	3
24 (23046046)	3
23 (28754486)	3

FDG-PET breast dedicated	Usually not appropriate	Limited	☢☢☢ 1-10 mSv		1	1	16	1	0	0	0	0	0	0	0

References	Study Quality
2 (25341156)	4

Sestamibi MBI	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv		1	1	14	1	2	0	0	0	0	0	0

Variant 4: Adult female, 40 years of age or older. Palpable breast mass. Mammography findings are benign (BI-RADS 2) at the site of palpable mass. Next imaging study.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
US breast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	5	5	3	1	3	0	10	0	0	0	0

References	Study Quality
8 (12355002)	3
9 (12418762)	3
33 (16915997)	4
38 (22119297)	3

Image-guided core biopsy breast	Usually not appropriate	Expert Consensus	Varies	Varies	1	1	16	1	0	0	0	0	0	0	0
Image-guided fine needle aspiration breast	Usually not appropriate	Expert Consensus	Varies	Varies	1	1	15	2	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	17	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	16	0	0	0	1	0	0	0	0
FDG-PET breast dedicated	Usually not appropriate	Limited	☢☢☢ 1-10 mSv		1	1	16	0	1	0	0	0	0	0	0

References	Study Quality
2 (25341156)	4

Sestamibi MBI	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv		1	1	17	0	0	0	0	0	0	0	0

Variant 5: Adult female, 40 years of age or older. Palpable breast mass. Mammography findings are negative (BI-RADS 1). Next imaging study.

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	O 0 mSv	O 0 mSv [ped]	9	9	0	0	1	1	1	0	2	3	9

References	Study Quality
2 (25341156)	4
8 (12355002)	3
9 (12418762)	3
19 (17929256)	4
20 (12636326)	3
39 (19933671)	3
18 (17350262)	3
38 (22119297)	3
26 (11348373)	3
40 (23096195)	3
22 (32023120)	3

Image-guided core biopsy breast	Usually not appropriate	Limited	Varies	Varies	1	1	16	0	0	0	1	0	0	0	0

References	Study Quality
38 (22119297)	3

Image-guided fine needle aspiration breast	Usually not appropriate	Limited	Varies	Varies	1	1	17	0	0	0	0	0	0	0	0

References	Study Quality
38 (22119297)	3

MRI breast without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	16	0	1	0	0	0	0	0	0

References	Study Quality

		2 (25341156)		4											
		8 (12355002)		3											
		9 (12418762)		3											
		19 (17929256)		4											
		25 (21477168)		3											
		24 (23046046)		3											
		23 (28754486)		3											
MRI breast without and with IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	12	1	1	0	3	0	0	0	0
		References		Study Quality											
		2 (25341156)		4											
		8 (12355002)		3											
		9 (12418762)		3											
		19 (17929256)		4											
		25 (21477168)		3											
		24 (23046046)		3											
		23 (28754486)		3											
FDG-PET breast dedicated	Usually not appropriate	Limited	☢☢☢ 1-10 mSv		1	1	17	0	0	0	0	0	0	0	0
		References		Study Quality											
		2 (25341156)		4											
Sestamibi MBI	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv		1	1	17	0	0	0	0	0	0	0	0

Variant 6: Adult female, younger than 30 years of age. Palpable breast mass. 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	O 0 mSv	O 0 mSv [ped]	9	9	0	0	0	0	1	0	0	2	14

References	Study Quality
42 (1732936)	4
43 (2664867)	3
33 (16915997)	4
41 (2267387)	3
44 (3763885)	4
47 (26742998)	4

Image-guided core biopsy breast	Usually not appropriate	Expert Consensus	Varies	Varies	1	1	15	0	0	0	1	0	1	0	0
Image-guided fine needle aspiration breast	Usually not appropriate	Expert Consensus	Varies	Varies	1	1	15	0	0	0	2	0	0	0	0
Mammography diagnostic	Usually not appropriate	Limited	☢☢ 0.1-1mSv		1	1	13	0	2	1	0	0	0	1	0

References	Study Quality
42 (1732936)	4
43 (2664867)	3
45 (22358028)	4
46 (12558355)	3
41 (2267387)	3
44 (3763885)	4

Mammography screening	Usually not appropriate	Expert Consensus	☢☢ 0.1-1mSv		1	1	16	0	0	0	0	0	0	1	0
MRI breast without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	15	0	1	1	0	0	0	0	0

References	Study Quality
2 (25341156)	4
25 (21477168)	3
24 (23046046)	3
23 (28754486)	3

MRI breast without and with IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	13	0	2	1	0	0	1	0	0

References	Study Quality
2 (25341156)	4
25 (21477168)	3
24 (23046046)	3
23 (28754486)	3

FDG-PET breast dedicated	Usually not appropriate	Limited	☢☢☢ 1-10 mSv		1	1	16	1	0	0	0	0	0	0	0

References	Study Quality
2 (25341156)	4

Digital breast tomosynthesis diagnostic	Usually not appropriate	Limited	☢☢ 0.1-1mSv		1	1	14	0	2	1	0	0	0	0	0

References	Study Quality
42 (1732936)	4
43 (2664867)	3
45 (22358028)	4
46 (12558355)	3
41 (2267387)	3
44 (3763885)	4

Digital breast tomosynthesis screening	Usually not appropriate	Expert Consensus	☢☢ 0.1-1mSv		1	1	16	0	0	0	0	0	0	1	0
Sestamibi MBI	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv		1	1	16	0	1	0	0	0	0	0	0

Variant 7: Adult female, younger than 30 years of age. Palpable breast mass. US findings are suspicious or highly suggestive of malignancy (BI-RADS 4 or 5). Next imaging study.

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

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Image-guided core biopsy breast	Usually appropriate	Limited	Varies	Varies	9	9	1	0	1	0	2	0	1	3	9
References	Study Quality														
27 (17924407)	3														
50 (21135519)	3														
51 (22180235)	3														
Digital breast tomosynthesis diagnostic	Usually appropriate	Strong	☢☢ 0.1-1mSv		8	8	0	0	0	0	2	2	4	1	8
References	Study Quality														
49 (24484063)	1														
48 (26499000)	2														
Mammography diagnostic	Usually appropriate	Limited	☢☢ 0.1-1mSv		7	7	0	0	1	0	2	2	4	2	6
References	Study Quality														
41 (2267387)	3														
Image-guided fine needle aspiration breast	May be appropriate (Disagreement)	Expert Opinion	Varies	Varies	5	5	6	1	1	4	3	0	2	0	0
References	Study Quality														
27 (17924407)	3														
50 (21135519)	3														
51 (22180235)	3														
Mammography screening	Usually not appropriate	Expert Consensus	☢☢ 0.1-1mSv		1	1	16	0	0	1	0	0	0	0	0
MRI breast without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	15	0	1	1	0	0	0	0	0
References	Study Quality														
2 (25341156)	4														
25 (21477168)	3														

		24 (23046046)		3											
		23 (28754486)		3											
MRI breast without and with IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	13	0	1	2	0	0	1	0	0
		References		Study Quality											
		2 (25341156)		4											
		25 (21477168)		3											
		24 (23046046)		3											
		23 (28754486)		3											
FDG-PET breast dedicated	Usually not appropriate	Limited	☢☢☢ 1-10 mSv		1	1	16	0	1	0	0	0	0	0	0
		References		Study Quality											
		2 (25341156)		4											
Digital breast tomosynthesis screening	Usually not appropriate	Expert Consensus	☢☢ 0.1-1mSv		1	1	16	0	0	1	0	0	0	0	0
Sestamibi MBI	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv		1	1	16	0	1	0	0	0	0	0	0

Variant 8: Adult female, younger than 30 years of age. Palpable breast mass. US findings probably benign (BI-RADS 3). Next imaging study.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Image-guided core biopsy breast	Usually not appropriate	Limited	Varies	Varies	1	1	12	0	3	2	0	0	0	0	0
		References		Study Quality											
		30 (-3098656)		4											
Image-guided fine needle aspiration breast	Usually not appropriate	Limited	Varies	Varies	1	1	13	1	2	1	0	0	0	0	0
		References		Study Quality											
		27 (17924407)		3											

		30 (-3098656)		4											
Mammography diagnostic	Usually not appropriate	Expert Consensus	☢☢ 0.1-1mSv		1	1	16	0	1	0	0	0	0	0	0
Mammography screening	Usually not appropriate	Expert Consensus	☢☢ 0.1-1mSv		1	1	17	0	0	0	0	0	0	0	0
MRI breast without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	16	0	1	0	0	0	0	0	0
		References		Study Quality											
		2 (25341156)		4											
		25 (21477168)		3											
		24 (23046046)		3											
		23 (28754486)		3											
MRI breast without and with IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	14	1	1	0	1	0	0	0	0
		References		Study Quality											
		2 (25341156)		4											
		25 (21477168)		3											
		24 (23046046)		3											
		23 (28754486)		3											
FDG-PET breast dedicated	Usually not appropriate	Limited	☢☢☢ 1-10 mSv		1	1	17	0	0	0	0	0	0	0	0
		References		Study Quality											
		2 (25341156)		4											
Digital breast tomosynthesis diagnostic	Usually not appropriate	Expert Consensus	☢☢ 0.1-1mSv		1	1	16	0	1	0	0	0	0	0	0
Digital breast tomosynthesis screening	Usually not appropriate	Expert Consensus	☢☢ 0.1-1mSv		1	1	16	0	1	0	0	0	0	0	0
Sestamibi MBI	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv		1	1	17	0	0	0	0	0	0	0	0

Variant 9: Adult female, younger than 30 years of age. Palpable breast mass. US findings benign (BI-RADS 2). Next imaging study.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Image-guided core biopsy breast	Usually not appropriate	Limited	Varies	Varies	1	1	14	2	0	0	1	0	0	0	0
		References		Study Quality											
		52 (26274736)		3											
Image-guided fine needle aspiration breast	Usually not appropriate	Expert Consensus	Varies	Varies	1	1	13	2	0	0	1	0	1	0	0
Mammography diagnostic	Usually not appropriate	Expert Consensus	☢☢ 0.1-1mSv		1	1	13	2	0	1	0	1	0	0	0
Mammography screening	Usually not appropriate	Expert Consensus	☢☢ 0.1-1mSv		1	1	16	0	0	0	1	0	0	0	0
MRI breast without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	15	1	1	0	0	0	0	0	0
		References		Study Quality											
		2 (25341156)		4											
		25 (21477168)		3											
		24 (23046046)		3											
		23 (28754486)		3											
MRI breast without and with IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	15	1	0	0	0	0	0	1	0
		References		Study Quality											
		2 (25341156)		4											
		25 (21477168)		3											
		24 (23046046)		3											
		23 (28754486)		3											

FDG-PET breast dedicated	Usually not appropriate	Limited	☢☢☢ 1-10 mSv		1	1	17	0	0	0	0	0	0	0	0
		References		Study Quality											
		2 (25341156)		4											
Digital breast tomosynthesis diagnostic	Usually not appropriate	Expert Consensus	☢☢ 0.1-1mSv		1	1	13	2	0	1	0	1	0	0	0
Digital breast tomosynthesis screening	Usually not appropriate	Expert Consensus	☢☢ 0.1-1mSv		1	1	16	0	0	0	1	0	0	0	0
Sestamibi MBI	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv		1	1	16	0	1	0	0	0	0	0	0

Variant 10: Adult female, younger than 30 years of age. Palpable breast mass. US findings negative (BI-RADS 1). Next imaging study.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Image-guided core biopsy breast	Usually not appropriate	Expert Consensus	Varies	Varies	1	1	16	0	0	0	1	0	0	0	0
Image-guided fine needle aspiration breast	Usually not appropriate	Expert Consensus	Varies	Varies	1	1	16	0	0	0	1	0	0	0	0
Mammography diagnostic	Usually not appropriate	Limited	☢☢ 0.1-1mSv		1	1	9	1	2	3	1	0	0	1	0
		References		Study Quality											
		41 (2267387)		3											
Mammography screening	Usually not appropriate	Expert Consensus	☢☢ 0.1-1mSv		1	1	16	0	0	0	1	0	0	0	0
MRI breast without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	15	1	1	0	0	0	0	0	0
		References		Study Quality											
		2 (25341156)		4											

		25 (21477168)		3											
		24 (23046046)		3											
		23 (28754486)		3											
MRI breast without and with IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	12	2	2	0	0	0	0	1	0
		References		Study Quality											
		2 (25341156)		4											
		25 (21477168)		3											
		24 (23046046)		3											
		23 (28754486)		3											
FDG-PET breast dedicated	Usually not appropriate	Limited	☢☢☢ 1-10 mSv		1	1	17	0	0	0	0	0	0	0	0
		References		Study Quality											
		2 (25341156)		4											
Digital breast tomosynthesis diagnostic	Usually not appropriate	Limited	☢☢ 0.1-1mSv		1	1	9	1	2	3	1	0	0	1	0
		References		Study Quality											
		41 (2267387)		3											
Digital breast tomosynthesis screening	Usually not appropriate	Expert Consensus	☢☢ 0.1-1mSv		1	1	16	0	0	0	1	0	0	0	0
Sestamibi MBI	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv		1	1	16	0	1	0	0	0	0	0	0

Variant 11: Adult female, 30 to 39 years of age. Palpable breast mass. Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Digital breast tomosynthesis diagnostic	Usually appropriate	Strong	☢☢ 0.1-1mSv		9	9	0	0	0	0	1	1	3	3	9
		References		Study Quality											

		53 (17690501)		4												
		17 (22593120)		2												
		16 (26133221)		2												
		13 (23255766)		3												
		54 (28777649)		3												
		15 (29174225)		3												
		22 (32023120)		3												
Mammography diagnostic	Usually appropriate	Limited	☢☢ 0.1-1mSv		8	8	0	0	0	0	1	1	3	4	8	
		References		Study Quality												
		53 (17690501)		4												
		40 (23096195)		3												
		54 (28777649)		3												
		22 (32023120)		3												
US breast	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	0	3	0	3	3	8	
		References		Study Quality												
		53 (17690501)		4												
		43 (2664867)		3												
		41 (2267387)		3												
		40 (23096195)		3												
Image-guided core biopsy breast	Usually not appropriate	Expert Consensus	Varies	Varies	1	1	14	1	0	0	0	0	1	0	1	
Image-guided fine needle aspiration breast	Usually not appropriate	Expert Consensus	Varies	Varies	1	1	14	1	0	0	1	1	0	0	0	
Mammography screening	Usually not appropriate	Expert Consensus	☢☢ 0.1-1mSv		1	1	16	0	0	0	1	0	0	0	0	
MRI breast without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	15	0	1	1	0	0	0	0	0	
		References		Study Quality												

		2 (25341156)		4											
		25 (21477168)		3											
		24 (23046046)		3											
		23 (28754486)		3											
MRI breast without and with IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	13	1	1	1	0	0	1	0	0
		References		Study Quality											
		2 (25341156)		4											
		25 (21477168)		3											
		24 (23046046)		3											
		23 (28754486)		3											
FDG-PET breast dedicated	Usually not appropriate	Limited	☢☢☢ 1-10 mSv		1	1	16	0	0	1	0	0	0	0	0
		References		Study Quality											
		2 (25341156)		4											
Digital breast tomosynthesis screening	Usually not appropriate	Expert Consensus	☢☢ 0.1-1mSv		1	1	16	0	0	0	1	0	0	0	0
Sestamibi MBI	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv		1	1	15	1	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.**