

# APPENDIX B — MAMMOGRAPHY LEXICON SUMMARY FORM

## ACR BI-RADS® — MAMMOGRAPHY LEXICON SUMMARY FORM

For each of the following categories, select the term that best describes the dominant lesion feature.

BREAST TISSUE		
Breast Composition ( <i>select one</i> )		
(A) The breasts are almost entirely fatty		
(B) There are scattered areas of fibroglandular density		
(C) The breasts are heterogeneously dense, which may obscure small masses		
(D) The breasts are extremely dense, which lowers the sensitivity of mammography		
FINDINGS		
<b>A. Masses:</b> A mass is 3D and occupies space (either seen in two different mammographic projections or on consecutive DBT slice). It has a completely or partially convex-outward contour and (if radiodense) is denser in the center than at the periphery.		
<b>1. Shape</b> ( <i>select one</i> )	a. Oval	Elliptical with one axis longer than the other two
	b. Lobulated	Displays one or more indentations resulting in an undulating contour
	c. Round	Spherical, ball-shaped, circular
	d. Irregular	Neither oval, lobulated nor round; shows acute-angle protrusions
<b>2. Margin</b> ( <i>select one</i> )	a. Circumscribed	At least 75% of the margin is sharply demarcated, with an abrupt transition between the lesion and surrounding tissue
	b. Obscured	25% or more of the margin is hidden by superimposed or adjacent fibroglandular tissue (but the visible margin is circumscribed)
	c. Indistinct	No clear demarcation of the entire margin or any portion of it from the surrounding tissue
	d. Spiculated	Margin is characterized by lines radiating from the mass
<b>3. Density</b> ( <i>select one</i> )	a. Fat-containing	Includes all masses containing fat, such as oil cyst, lipoma, or galactocoele as well as mixed-density lesions such as hamartoma
	b. Low density	X-ray attenuation of the mass is less than the expected attenuation of an equal volume of fibroglandular breast tissue
	c. Equal density	X-ray attenuation of the mass is the same as the expected attenuation of an equal volume of fibroglandular breast tissue
	d. High density	X-ray attenuation of the mass is greater than the expected attenuation of an equal volume of fibroglandular breast tissue
<b>B. Calcifications</b> ( <i>select one</i> )		
<b>1. Typically benign</b> ( <i>select all that apply</i> )	a. Skin	Usually lucent-centered and pathognomonic in appearance
	b. Vascular	Parallel tracks or linear, tubular calcifications that are usually clearly associated with blood vessels

	c. Coarse	These calcifications are classic, large (> 2 to 3 mm in greatest diameter), dense and confluent
	d. Large rod-like	Associated with ductal ectasia, may form solid or discontinuous, smooth linear rods often with tapering ends
	e. Round	Usually small and smooth but may vary in size and, therefore, also in opacity
	f. Rim	Appear as calcium deposited on the surface of a sphere (usually < 1 mm in thickness when viewed on edge)
	g. Layering	A manifestation of sedimented calcifications in macro- or microcysts, usually but not always grouped. On the CC image — often less evident and appear as round, smudgy deposits, while occasionally on MLO and especially on 90° lateral (LM/ML) views — more clearly defined and often semilunar, crescent shaped, curvilinear (concave up) or linear, defining the dependent portion of cysts. The most important feature of these calcifications is the apparent change in shape of the calcific particles on different mammographic projections (CC versus occasionally the MLO view and especially LM/ML views)
	h. Suture	Typically linear or tubular in appearance; when present, knots are frequently visible
<b>2. Suspicious morphology</b> (select one)	a. Amorphous	So small and/or hazy/formless in appearance that a more specific particle shape cannot be determined
	b. Coarse heterogeneous	Irregular, conspicuous calcifications that are generally between 0.5 mm and 1 mm and tend to coalesce but are smaller than coarse calcifications
	c. Fine pleomorphic	Usually more conspicuous than amorphous forms and are seen to have discrete shapes — these irregular calcifications are distinguished from fine linear and fine linear-branching forms by the absence of fine-linear particles — they vary in size and shape and are usually < 0.5 mm in diameter
	d. Fine linear or fine linear-branching	Thin, linear, irregular calcifications, which may be discontinuous and < 0.5 mm in caliber — occasionally, branching forms may be seen
<b>3. Distribution</b> (select one)	a. Diffuse	Distributed randomly throughout the breast
	b. Regional	Used for numerous calcifications that occupy a large portion of breast tissue (> 2 cm in greatest dimension) but not the entire breast, not conforming to a duct distribution — may involve most of a quadrant or even more than a single quadrant
	c. Grouped	Used when relatively few calcifications occupy a small portion of breast tissue — generally at least 5 calcifications grouped within 1 cm of each other or a greater number within 2 cm of each other
	d. Linear	Calcifications arrayed in a line
	e. Segmental	Used when the distribution of calcifications suggests deposits in a duct or ducts and their branches, generally arranged in a triangular arrangement with apex point toward the nipple
<b>C. Architectural distortion:</b> The parenchyma is distorted with no definite mass visible.		

<b>D. Asymmetries:</b> Involve a spectrum of mammographic findings that represent unilateral deposits of fibroglandular tissue not conforming to the definition of a radiodense mass. <i>(select one)</i>		
<b>1. Global asymmetry</b>		Judged relative to the corresponding area in the contralateral breast and represents a large amount of fibroglandular-density tissue over a substantial portion of the breast (at least one quadrant) — there is no mass, distorted architecture, or associated suspicious calcifications
<b>2. Asymmetry</b>		An area of fibroglandular-density tissue that is visible on only one mammographic projection, frequently representing superimposition of normal breast structures (summation artifact)
<b>3. Focal asymmetry</b>		Seen on more than one view. Judged relative to the corresponding location in the contralateral breast and represents a relatively small amount of fibroglandular-density tissue over a confined portion of the breast (less than one quadrant) — having similar shape on different mammographic projections, with concave-outward contour, usually interspersed with fat. When new or more conspicuous, must be viewed with suspicion
<b>E. Lymph nodes</b>		
<b>Intramammary</b>	a. Normal	Circumscribed masses that are reniform and have hilar fat. They are generally 1 cm or smaller in size (but may be larger than 1 cm and still characterized as normal)
	b. Abnormal	May show rounded morphology and loss of fatty hila
<b>Axillary</b>	a. Normal	Circumscribed masses that are reniform and have hilar fat, thin cortex. Degree of suspicion is independent of length
	b. Abnormal	May show rounded morphology, cortical thickening and loss of fatty hila
<b>F. Skin lesion:</b> This finding may be described in the mammography report or annotated on the mammographic image when it projects over the breast (especially on two different projections) and may be mistaken for an intramammary lesion.		
<b>G. Dilated ducts</b>		
<b>1. Multiple dilated ducts</b>		Tubular structures often > 5 mm in diameter originating from the nipple; may be unilateral or bilateral and are typically a benign finding
<b>2. Solitary dilated duct</b>		Unilateral single or branching dilated duct often > 5 mm in diameter. May be a benign or suspicious finding
<b>H. Associated features:</b> Used with masses, architectural distortions, asymmetries, or calcifications, or may stand alone as findings when no other abnormality is present. <i>(select all that apply)</i>		
<b>1. Skin retraction</b>		The skin is pulled in abnormally
<b>2. Nipple retraction</b>		The nipple is pulled in (should not be confused with nipple inversion, which is often bilateral)
<b>3. Skin thickening</b>		May be focal or diffuse, and is defined as being > 2 mm in thickness
<b>4. Trabecular thickening</b>		A thickening of the fibrous septa of the breast
<b>I. Special cases</b>		
<b>1. Gynecomastia</b>		Benign development of breast tissue in one or both breasts in cisgender males
<b>2. Implants and other forms of augmentation</b>	Saline	
	Silicone	
	Other forms of augmentation	
<b>3. Mastectomy</b>		

**J. Location of finding** — The side is given first followed by the quadrant and clock-face position, then the depth of the lesion, and its distance from the nipple.

<b>1. Laterality</b>	Right, left or bilateral
<b>2. Location in breast</b>	Use clock-face position (preferred), or quadrant location (upper outer, upper inner, lower outer, lower inner). Use: retroareolar, central, and axillary tail preceded by right, left, or both breasts, when applicable
<b>3. Depth and/or Distance from the nipple</b>	Indicate depth in the breast (anterior, middle, posterior third)  Distance from base of nipple to center of finding in whole cm; include centimeters from the skin, or chest wall as appropriate

**ASSESSMENT CATEGORIES** (select one)

Incomplete Assessment	Management	Likelihood of Cancer
Incomplete: Need Additional Imaging Evaluation  OR Incomplete: Need Prior Mammograms for Comparison	Recall for additional imaging  Need comparison to prior examination(s)	N/A
Final Assessment	Management	Likelihood of Cancer
Category 1: Negative	Routine mammography screening	Essentially 0% likelihood of malignancy
Category 2: Benign	Routine mammography screening	Essentially 0% likelihood of malignancy
Category 3: Probably Benign	Short-interval (6-month) follow-up or continued surveillance mammography	> 0% but ≤ 2% likelihood of malignancy
Category 4: Suspicious – Category 4A: <i>Low suspicion for malignancy</i> – Category 4B: <i>Moderate suspicion for malignancy</i> – Category 4C: <i>High suspicion for malignancy</i>	Tissue diagnosis	2% but < 95% likelihood of malignancy >2% to ≤ 10% likelihood of malignancy  > 10% to ≤ 50% likelihood of malignancy  50% to < 95% likelihood of malignancy
Category 5: Highly Suggestive of Malignancy	Tissue diagnosis	≥ 95% likelihood of malignancy
Category 6: Known Biopsy-Proven Malignancy	Clinical follow-up with surgeon and/or oncologist, and definitive local therapy (usually surgery) when clinically appropriate	N/A