



**Live Webinar: Breast Density  
Webinar  
Jennifer A. Harvey, MD  
Tuesday, October 17, 2017  
7:00-8:00 pm EDT**

**SAM Questions, Rationales and References**

1. What is the risk of breast cancer for women with extremely dense breast tissue compared to women with fatty breasts?
  - A. 8 times more likely
  - B. 4 times more likely
  - C. 2 times more likely
  - D. Not increased

**Correct answer: B**

Rationale: Women with extremely dense breasts are about 4 times more likely to be diagnosed with breast cancer than women with fatty replaced breasts.

Reference:

Harvey JA, Bovbjerg VE. Quantitative assessment of mammographic breast density: Relationship with breast cancer risk. *Radiology* 2004;230:29-41.

Boyd NF, Lockwood GA, Byng JW, Trichler DL, Yaffe MJ. Mammographic densities and breast cancer risk. *Cancer Epidemiol Biomarkers Prev* 1998;7:1133-1144.

2. Which of the following examinations results in the highest increase in breast cancer detection for women with extremely dense breast tissue?
  - A. Digital mammography
  - B. Tomosynthesis
  - C. Screening ultrasound
  - D. Clinical breast examination

**Correct answer: C**

Rationale: Screening ultrasound detects 30% more cancers than mammography alone. Tomosynthesis results in increased cancer detection, but the effect is much lower for women in the extremely dense category.

Reference:

Weigert JM. The Connecticut experiment continues: Ultrasound in the screening of women with dense breasts years 3 and 4. *Radiologic Society of North America 100th Annual Meeting Program* 2014.

Rafferty EA, Durand MA, Conant EF, et al. Breast Cancer Screening Using Tomosynthesis and Digital Mammography in Dense and Nondense Breasts. *JAMA* 2016;315 (16):1784-1786.

3. A low density breast that has an area of glandular tissue sufficiently dense to obscure small masses should be classified as:
- A. Fatty
  - B. Scattered fibroglandular densities
  - C. Heterogeneously dense
  - D. Extremely dense

**Correct answer: C**

Rationale: The fifth edition BI-RADS lexicon specifies that lower density mammograms should be upgraded to the heterogeneous category if there is tissue that is "...sufficiently dense to obscure small masses."

Reference:

D'Orsi CJ, Sickles EA, Mendelson EB, Morris EA. ACR BI-RADS® Atlas, Breast Imaging Reporting and Data System. 5th ed. Reston, Virginia: American College of Radiology, 2013;

4. In which density categories do women benefit the greatest in sensitivity and specificity from tomosynthesis?
- A. Fatty and scattered fibroglandular densities
  - B. Scattered and heterogeneously dense
  - C. Heterogeneously and extremely dense

Correct answer: B

Rationale: Women in the scattered and heterogeneously dense categories have the most improvement in cancer detection and specificity.

Reference:

Rafferty EA, Durand MA, Conant EF, et al. Breast Cancer Screening Using Tomosynthesis and Digital Mammography in Dense and Nondense Breasts. JAMA 2016;315(16):1784-1786.

5. Regarding breast density notification laws:
- A. About 25% of the states have one
  - B. All require that the woman be informed if she has dense breasts
  - C. All require information about breast density
  - D. Required information varies widely from state-to-state

**Correct answer: D**

Rationale: More than half of the states now have some type of breast density notification law. What is mandated to be communicated by the law varies widely from state-to-state with some only providing information about density to all women while others specify informing women with dense breasts plus/minus information about supplemental screening. (7)

Reference:

Dense Breast Info. <http://densebreast-info.org/>. 2017. 6/1/2017.

## References

1. Harvey JA, Bovbjerg VE. Quantitative assessment of mammographic breast density: Relationship with breast cancer risk. *Radiology* 2004;230:29-41.
2. Boyd NF, Lockwood GA, Byng JW, Tritchler DL, Yaffe MJ. Mammographic densities and breast cancer risk. *Cancer Epidemiol Biomarkers Prev* 1998;7:1133-1144.
3. Weigert JM. The Connecticut experiment continues: Ultrasound in the screening of women with dense breasts years 3 and 4. *Radiologic Society of North America 100th Annual Meeting Program* 2014
4. Tagliafico AS, Calabrese M, Mariscotti G, et al. Adjunct Screening With Tomosynthesis or Ultrasound in Women With Mammography-Negative Dense Breasts: Interim Report of a Prospective Comparative Trial. *J Clin Oncol* 2016
5. Rafferty EA, Durand MA, Conant EF, et al. Breast Cancer Screening Using Tomosynthesis and Digital Mammography in Dense and Nondense Breasts. *JAMA* 2016;315(16):1784-1786.
6. D'Orsi CJ, Sickles EA, Mendelson EB, Morris EA. *ACR BI-RADS® Atlas, Breast Imaging Reporting and Data System*. 5th ed. Reston, Virginia: American College of Radiology, 2013;
7. Dense Breast Info. <http://densebreast-info.org/>. 2017. 6/1/2017.