
Q7 Breast Density

Which *one* of the following statements about breast density is *false*?

- 1. Breast density can be determined by physical examination.
- 2. Extremely dense breasts confer a risk of breast cancer that is greater than that of having a first-degree relative with breast cancer.
- 3. Sensitivity of mammogram screening is only 50% for those with the most severe category of breast density.
- 4. Supplementing mammogram screening with ultrasound screening can improve breast cancer detection in women with dense breasts.

Educational Point: A deeper understanding of the importance of breast density as a breast cancer risk factor has prompted a number of provincial and territorial screening programs to inform women of their breast density results directly. Dense breasts have a higher proportion of fibroglandular tissue than fatty tissue. **Breast density cannot be determined by any means other than mammogram screening - there is no way to tell fibroglandular density based on appearance, clinical examination, or size of breasts.** Density can be expressed as a percentage or using categories of the American College of Radiology Breast Imaging Reporting and Data System: A, for fatty-replaced, low-density tissue; B, for scattered areas of fibroglandular tissue density; C, for heterogeneously dense tissue; and D, for extremely dense tissue. Category D corresponds to density greater than 75%. Dense breasts are considered to be those in categories C and D and are seen in approximately 40% of women between the ages of 40 and 74 years. Breast density tends to diminish over time: close to 60% of women in their 40s have high breast density compared with only about 25% of women in their 70s. Those women whose breast density does not decrease with time are more likely to be diagnosed with breast cancer. Modifiable factors such as hormone exposure, alcohol intake, and diet can contribute to increased breast density.

Extremely dense breasts confer a risk of breast cancer that is greater than that of having a first-degree relative with breast cancer. Breast cancers are masked by fibroglandular tissue in dense breasts. **Sensitivity for mammogram screening of breasts is 98% for those with category A density, but only 50% for those with category D density.** Women with extremely dense breasts are therefore 5 to 13 times more likely to present with interval cancers- cancers found after a normal screening mammogram - which have a poorer prognosis than screen-detected cancers. It is suggested that women with extremely dense breasts have annual mammography to reduce the risk of interval cancers. **Supplementing mammogram screening with MRI or ultrasound screening can improve breast cancer detection in women with category C or D breast density.** Supplemental MRI finds an additional 16 breast cancers per 1000 screens after normal mammogram findings in women with dense breasts. Supplemental ultrasound detects an average of 2 to 3 cancers per 1000 women screened after normal mammogram findings in women with dense breasts, and 1 Canadian center detected 7 more cancers for every 1000 screens of women with dense breasts.

The correct answer is 1.

Reference: Wilkinson AN. Breast density notification: Are family doctors prepared to counsel patients on risks and management? *Can Fam Physician*. 2023 Nov;69(11):748-750.

Link: <https://www.cfp.ca/content/cfp/69/11/748.full.pdf>

PMID: 37963789