



The American College of
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WOMEN'S HEALTH CARE PHYSICIANS

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Management of Women With Dense Breasts Diagnosed by Mammography

ABSTRACT: Women with dense breasts have a modestly increased risk of breast cancer and experience reduced sensitivity of mammography to detect breast cancer. However, evidence is lacking to advocate for additional testing until there are clinically validated data that indicate improved screening outcomes. Currently, screening mammography remains the most useful tool for breast cancer detection and consistently has demonstrated a reduction in breast cancer mortality. The American College of Obstetricians and Gynecologists does not recommend routine use of alternative or adjunctive tests to screening mammography in women with dense breasts who are asymptomatic and have no additional risk factors. The American College of Obstetricians and Gynecologists recommends that health care providers comply with state laws that may require disclosure to women of their breast density as recorded in a mammogram report.

Dense breast tissue is common in younger women. Dense breast tissue absorbs significantly more radiation during mammography compared with fatty breast tissue (1). This occurrence reduces the accuracy of mammography to detect breast cancer in women with dense breast tissue (2, 3). Currently, screening mammography remains the most useful tool for breast cancer detection and consistently has demonstrated a reduction in breast cancer mortality. Nonetheless, mammography does not detect all breast cancer.

Women with dense breasts (Breast Imaging Reporting and Data System [BI-RADS] category 3 and 4) have a modestly increased risk of breast cancer and experience reduced sensitivity of mammography to detect breast cancer (see Table 1) (2). Although categories have been established, the assessment of breast density is subjective and based on the opinion of the radiologist. In women with heterogeneously dense or extremely dense breasts, digital mammography has been shown to be more effective compared with film mammography for breast cancer screening (2). Numerous states have passed legislation that require health care providers to inform women of the modest increased risk of breast cancer and reduced sensitivity of mammography, and several states require

practitioners to discuss supplemental tests to screening mammography for women with dense breasts. Current published evidence does not demonstrate meaningful outcome benefits (eg, reduction in breast cancer mortality) with supplemental tests (eg, ultrasonography and magnetic resonance imaging) to screening mammography or with alternative screening modalities (eg, breast tomosynthesis or thermography) in women with dense breasts who do not have additional risk factors. Evidence is lacking to advocate for additional testing until there are clinically validated data that indicate improved screening outcomes.

The American College of Obstetricians and Gynecologists (the College) does not recommend routine use of alternative or adjunctive tests to screening mammography in women with dense breasts who are asymptomatic and have no additional risk factors. The College strongly supports additional research to identify more effective screening methods that will enhance meaningful improvements in cancer outcomes for women with dense breasts and minimize false-positive screening results. The College recommends that health care providers comply with state laws that may require disclosure to women of their breast density as recorded in a mammogram report.

Table 1. BI-RADS Breast Density Categories, Demographics, Sensitivity of Cancer Detection, and Breast Cancer Risk ↩

BI-RADS Category	Description	Percentage of Population*	Sensitivity† (%)	Relative Risk of Breast Cancer‡
1	Almost entirely fat	10	88	---
2	Scattered fibroglandular densities	43	82	---
3	Heterogeneously dense	39	69	1.2 (compared with average breast density)
4	Extremely dense	8	62	2.1 (compared with average breast density)

Abbreviation: BI-RADS, Breast Imaging Reporting and Data System.

*Pisano ED, Gatsonis C, Hendrick E, Yaffe M, Baum JK, Acharyya S, et al. Diagnostic performance of digital versus film mammography for breast-cancer screening. Digital Mammographic Imaging Screening Trial (DMIST) Investigators Group [published erratum appears in N Engl J Med 2006;355:1840]. [N Engl J Med 2005;353:1773–83](#).

†Carney PA, Miglioretti DL, Yankaskas BC, Kerlikowske K, Rosenberg R, Rutter CM, et al. Individual and combined effects of age, breast density, and hormone replacement therapy use on the accuracy of screening mammography [published erratum appears in Ann Intern Med 2003;138:771]. [Ann Intern Med 2003;138:168–75](#).

‡Sickles EA. The use of breast imaging to screen women at high risk for cancer. [Radiol Clin North Am 2010;48:859–78](#).

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2. Pisano ED, Gatsonis C, Hendrick E, Yaffe M, Baum JK, Acharyya S, et al. Diagnostic performance of digital versus film mammography for breast-cancer screening. Digital Mammographic Imaging Screening Trial (DMIST) Investigators Group [published erratum appears in N Engl J Med 2006;355:1840]. *N Engl J Med* 2005;353:1773–83. [\[PubMed\]](#) [\[Full Text\]](#) ↩
3. Breast Cancer Surveillance Consortium. Evaluating screening performance in practice. Bethesda (MD): National Cancer Institute; 2004. Available at: <http://breastscreening.cancer.gov/espp.pdf>. Retrieved December 18, 2013. ↩

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