

Breast Density, Breast Cancer Risk and Wisconsin
Breast Density Notification Law (2017 Wisconsin Act 201)

Scenarios for Clinicians

Content adapted from the California Breast Density Information Group, March 2013



Scenario 1

My patient received the letter stating she has dense breasts.
Now she is wondering whether she should continue to get mammograms at all.



She should continue to get screening mammograms. The breast density law does not reflect any change in the current mammography screening recommendations by professional medical societies.

Mammograms have been shown to be effective in lowering breast cancer mortality for all breast densities. Mammography is the only screening modality that has undergone randomized controlled trials demonstrating a reduction in breast cancer mortality. There is no recommendation that it be replaced with another test in any subset of the population.

Scenario 2

My patient received the new breast density letter.
She is concerned because she now thinks she is at high risk for breast cancer.



Reassure the patient that breast density alone has only a small impact on breast cancer risk.



She wants to know specifically how it changes her risk.



Refer to her mammogram report (different from the patient letter).

1. If her density is BI-RADS category C: Heterogeneously dense, this is associated with a minimal risk above average (RR=1.2 compared to average breast density).
2. If her density is BI-RADS category D: Extremely dense, this double her risk of breast cancer compared to a woman with average density breasts and is has a relative risk of 4-6 compared to women with BI-RADS category A: almost entirely fat. This is a risk similar to having two first degree relatives with breast cancer.

Scenario 3

My patient received the new breast density letter.
She wants to be screened with another modality instead of mammograms.



Explain that at this point in time, there is **no** other method that is recommended to replace the mammogram. There are certain manifestations of cancer (for example, calcifications) that are only seen on mammography. The other “screening options” referred to in the letter are in addition to, and not instead of, a routine screening mammogram.

Scenario 4

My patient has “heterogeneously dense” or “extremely dense” breasts and she also has other risk factors. She has completed a risk assessment showing her overall risk to be high (e.g., calculated >20% lifetime risk or >5% 10-year risk), or has a BRCA mutation or history of mantle radiation.



Recommend annual breast MRI and annual mammogram for screening.
Screening breast MRI is typically covered by insurance for high-risk women.
If a woman is being screened annually with MRI and mammogram,
no additional screening tests (such as ultrasound) are needed.

Scenario 5

My patient has “heterogeneously dense” or “extremely dense” breasts and she also has other risk factors. She has completed a risk assessment showing her overall risk to be high (e.g., calculated >20% lifetime risk or >5% 10-year risk).



MRI was recommended but the patient is unable or unwilling to have the exam.



Recommend screening ultrasound as the second-best supplementary screening test for high-risk women. Studies have shown some utility for ultrasound in high-risk women if screening MRI is not performed.

Scenario 6

My patient received the new breast density letter. She wants to get additional tests to be screened for breast cancer.

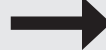


Does she have a first degree relative (mother, sister, daughter) who had premenopausal breast or ovarian cancer, or a male relative with breast cancer?

or

Does she have a history of atypia (ADH, ALH) or LCIS on a previous breast biopsy?

YES



She would likely benefit from a breast cancer risk assessment.

This could be performed by a physician with experience in breast cancer risk model selection and interpretation, or by a cancer risk assessment program.

NO



If the patient does not have other breast cancer risk factors, **reassure** her that her risk remains low. **Educate** the patient about the risks and benefits of screening MRI and ultrasound (higher cancer detection, but also higher false positive biopsy rates and short-term follow-up recommendations). Many health centers have chosen not to offer screening breast ultrasound, in part because ultrasound depicts many fewer mammographically invisible cancers than does screening MRI.

If available, digital breast tomosynthesis (DBT) is a screening test with increased cancer detection and decreased false positives compared to 2D traditional mammography. However, DBT, breast ultrasound, and screening MRI all have variable insurance coverage based on the patient's risk and insurance plan. Assist the patient in making the best personal choice for her needs based on these factors.

Editor's Note: This content was adapted from California Breast Density Information Group (DBDIG). Breast Density, Breast Cancer Risk, and California Breast Density Notification Law SB 1538: Scenarios for Clinicians. March 2013. <http://www.breastdensity.info/docs/DENSITY-SCENARIOS-FOR-CLINICIANS.pdf>. Accessed May 26, 2018.

California Breast Density Information Group

Stanford University School of Medicine

Debra M. Ikeda, MD
Jafi A. Lipson, MD
Bruce L. Daniel, MD
Allison Kurian, MD, MSc

University of California, Davis

Karen K. Lindfors, MD
Jonathan Hargreaves, MD
Donna D. Walgenbach, MS, CGC
Elyse Love, MS, CGC

University of California, Irvine

Stephen Feig, MD

University of California, San Diego

Haydee Ojeda-Fournier, MD

University of California, San Francisco

Bonnie N. Joe, MD, PhD
Edward A Sickles, MD
Elissa R. Price, MD
Lauren Ryan, MS, LCGC

University of California, Los Angeles

Lawrence Bassett, MD

Alta-Bates Summit Medical Center

R. James Brenner, MD, JD

California Pacific Medical Center

Jessica W. T. Leung, MD

References

American College of Radiology. Breast Imaging Reporting and Data System® (BI-RADS®) 5. Reston, Va: American College of Radiology; 2013.

Berg WA, Blume JD, Cormack JB, et al. Combined screening with ultrasound and mammography vs mammography alone in women at elevated risk of breast cancer. *JAMA*. 2008;299:2151-2163.

Berg WA, Zhang Z, Lehrer D, et al. Detection of breast cancer with addition of annual screening ultrasound or a single screening MRI to mammography in women with elevated breast cancer risk. *JAMA*. 2012;307:1394-1404.

Bever TB, Anderson BO, Bonaccio E, et al. NCCN clinical practice guidelines in oncology: breast cancer screening and diagnosis. *J Natl Compr Cancer Netw*. *JNCCN*. 2009;7(10):1060-1096.

Boyd NF, Guo H, Martin LJ, et al. Mammographic density and the risk and detection of breast cancer. *N Engl J Med*. 2007;356:227-236.

Buist DS, Porter PL, Lehman C, Taplin SH, White E. Factors contributing to mammography failure in women aged 40-49 years. *J Natl Cancer Inst*. 2004;96:1432-4140.

Carney PA, Miglioretti DL, Yankaskas BC, et al. Individual and combined effects of age, breast density, and hormone replacement therapy use on the accuracy of screening mammography. *Ann Intern Med*. 2003;138:168-175.

Hooley RJ, Greenberg KL, Stackhouse RM, Geisel JL, Butler RS, Philpotts LE. Screening US in patients with mammographically dense breasts: initial experience with Connecticut Public Act 09-41. *Radiology*. 2012;265:59-69.

Kelly KM, Dean J, Comulada WS, Lee SJ. Breast cancer detection using automated whole breast ultrasound and mammography in radiographically dense breasts. *Eur Radiol*. 2010;20:734-472.

Kuhl C, Weigel S, Schrading S, et al. Prospective multicenter cohort study to refine management recommendations for women at elevated familial risk of breast cancer: the EVA trial. *J Clin Oncol*. 2010;28:1450-1457.

Mainiero MB, Lourenco A, Mahoney MC, et al. ACR Appropriateness Criteria Breast Cancer Screening. *Journal of the American College of Radiology*. 2013;10:11-4.

Pinsky RW, Helvie MA. Mammographic breast density: effect on imaging and breast cancer risk. *J Natl Compr Cancer Netw*: *JNCCN*. 2010;8:1157-64; quiz 65.

Saslow D, Boetes C, Burke W, et al. American Cancer Society guidelines for breast screening with MRI as an adjunct to mammography. *CA Cancer J Clin.* 2007;57(2):75-89.

Schousboe JT, Kerlikowske K, Loh A, Cummings SR. Personalizing mammography by breast density and other risk factors for breast cancer: analysis of health benefits and cost-effectiveness. *Ann Intern Med.* 2011;155:10-20.

Sickles EA. The use of breast imaging to screen women at high risk for cancer. *Radiol Clin North Am.* 2010; 48:859-878.

Skaane P, Bandos AI, Gullien RT, et al. Comparison of digital mammography alone and digital mammography plus tomosynthesis in a population-based screening program. *Radiology.* 2013; Epub ahead of print.

Smith RA, Brooks D, Cokkinides V, Saslow D, Brawley OW. Cancer screening in the United States, 2013. *CA Cancer J Clin.* 2013; Epub ahead of print.

Tice JA, Cummings SR, Smith-Bindman R, Ichikawa L, Barlow WE, Kerlikowske K. Using clinical factors and mammographic breast density to estimate breast cancer risk: development and validation of a new predictive model. *Ann Intern Med.* 2008; 148:337-347.

Vachon CM, van Gils CH, Sellers TA, et al. Mammographic density, breast cancer risk and risk prediction. *Breast cancer research BCR.* 2007;9:217.

van Gils CH, Otten JD, Verbeek AL, Hendriks JH. Mammographic breast density and risk of breast cancer: masking bias or causality? *Eur J Epidemiol.* 1998;14:315-320.

Whitehead J, Carlile T, Kopecky KJ, et al. Wolfe mammographic parenchymal patterns. A study of the masking hypothesis of Egan and Mosteller. *Cancer.* 1985;56:1280-1286.