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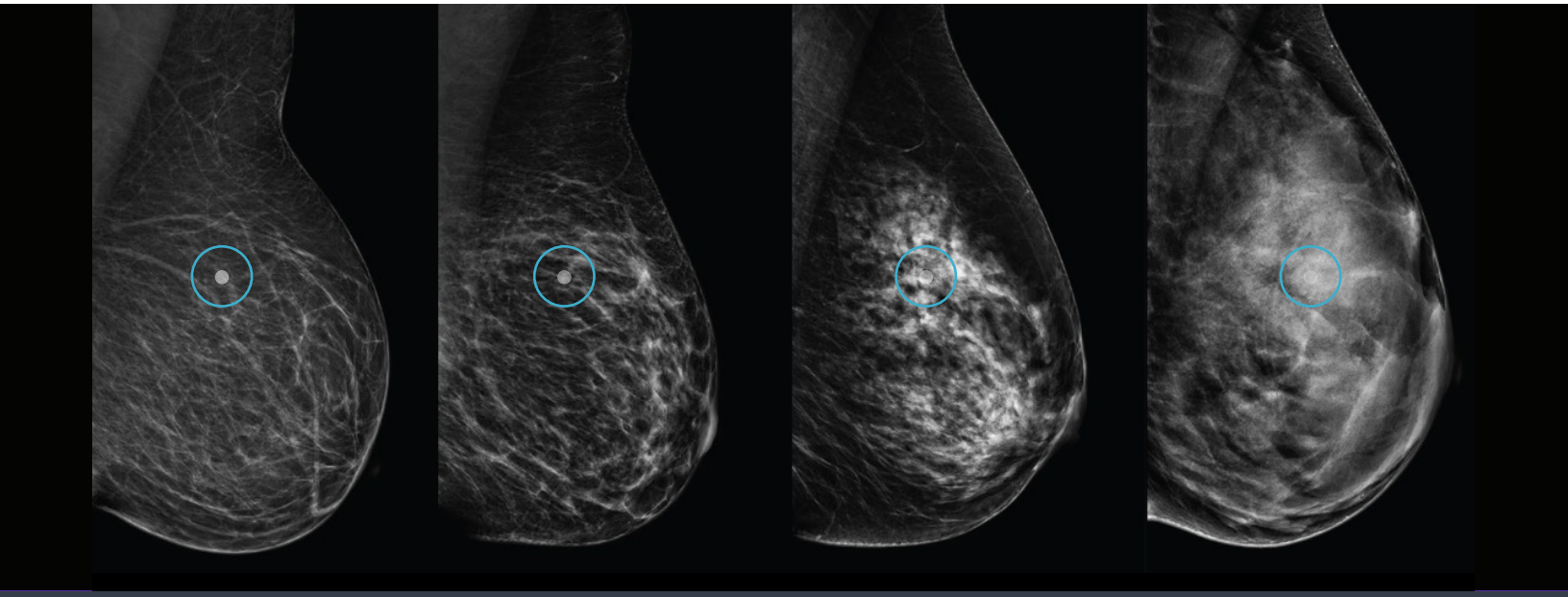
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All breasts are not the same.

I've been told that I have dense breast tissue – what does that mean?

Breasts are made of fat and breast tissue. When there is more breast tissue than fat, breasts are considered to be dense. On a mammogram, dense tissue looks white. Since masses or lumps also appear white on a mammogram, a lump may be hidden by the dense breast tissue. Dense breast tissue is also linked with an increase in the risk of developing breast cancer.

Having dense breast tissue is normal; it is a part of you, like having green eyes or brown hair. Dense breast tissue is common; 40% of women (and 70% of Asian women) have dense breasts.[1,2]* Since mammography has limited visibility in women with dense breast tissue, screening dense breasts with ultrasound, in addition to mammography, may improve the likelihood of detecting cancer. All women should discuss personal risk factors, including breast density, with their physician.



A	B	C	D
Almost Entirely Fatty	Scattered Fibroglandular Density	Heterogeneously Dense	Extremely Dense

Hypothetical cancer in circle and shown on the mammograms above. This is easily seen in the breasts with fatty (**A**) and scattered (**B**) density, but it is obscured on the heterogenously (**C**) and extremely dense (**D**) breasts.

What you need to know about breast density

It's in the media, your mammography report mentions it, and now a U.S. federal regulation will require mammography facilities to notify you about your breast density[3]

Breast tissue consists of fatty and fibroglandular tissue. Dense breast tissue is defined as having a higher percentage of fibroglandular tissue within your breasts. If more than 50% of your breast is made of fibroglandular tissue, then your breasts are classified as "dense." The sensitivity of mammography is significantly diminished in women with dense breast tissue.[4] Additionally, women with dense breast tissue have a 4-6 times higher risk of developing breast cancer than women with minimal fibroglandular tissue in their breasts.[5]

Looking for a snowball in a snowstorm?

You may have heard the statement that looking for cancer in dense breast tissue is like looking for a snowball in a snowstorm. This is a descriptive way of explaining why dense breast tissue can potentially mask breast cancers. On an X-ray mammogram, both dense breast tissue and cancers show up as white. Therefore, with mammography, a cancer can easily hide in a background of dense breast tissue since they both appear white. Alternatively, in fatty tissue, which is gray, a white mass (cancer) can be readily identified.

My breasts don't feel dense so I must not have dense breast tissue, right?

Breast density cannot be determined by palpation or by the appearance of the breasts – it can only be determined by evaluating a mammogram. Your radiologist performs your breast density assessment at the time your mammogram is reviewed.

Isn't dense breast tissue only a problem for young women?

Generally speaking, it is true that younger women usually have denser breast tissue and most women will have fatty replacement of dense glandular breast tissue as they age. However, that being said, 74% of women in their 40s, 57% of women in their 50s, 44% of women in their 60s, and 36% of women in their 70s have dense breast tissue.[6]

Is having dense breasts normal?

Yes, having dense breast tissue is normal. It is a feature of your body. Over 40% of women (and 70% of Asian women) have dense breast tissue.[1,2]*

How can I stop having dense breast tissue?

Dense breast tissue is a physical attribute like other features of your body. It is not something that you can actively try to change or improve. The best thing to do is to become informed, know your personal risk factors, and participate in regular breast screening.

Does this mean that I no longer need a mammogram?

Mammography is still the gold standard and is the only way to tell if you have dense breasts. Supplemental imaging is meant to complement mammography, not replace it. If your doctor recommends a breast ultrasound exam, it should not be performed in isolation.

What happens next if I have dense breasts?

If you have dense breasts, the addition of automated breast ultrasound (ABUS) when used with mammography has been shown to improve breast cancer detection compared to mammography alone[7,8] and has the potential to avoid unnecessary biopsies.[9] Ask your doctor if ABUS screening would benefit you.

*Shown in various studies conducted in the U.S., Europe, and New Zealand.

1. Pisano et al. *NEJM* 2005; 353: 1773.
2. Ellison-Loschman, et al, *PLOS ONE* July 2013.
3. https://public-inspection.federalregister.gov/2023-04550.pdf. Effective September 10, 2024.
4. Mandelson et al. Breast density as a predictor of mammographic detection: comparison of interval- and screen-detected cancers. *J Natl Cancer Inst* 2000; 92: 1081–1087.
5. Boyd NF et al. Mammographic Density and the Risk and Detection of Breast Cancer. *NEJM* 2007; 356: 227-36.
6. Checka CM, Chun JE, Schnabel FR, Lee J, Toth H. The relationship of mammographic density and age: implications for breast cancer screening. *AJR Am J Roentgenol.* 2012 Mar; 198 (3): W292-5.
7. FDA PMA P110006 summary of safety and effectiveness.
8. Brem RF, Tabár L, et.al. *Radiology.* 2015 Mar; 274(3): 663-73.
9. Wenhui Ren, MPH, & Youlin Qiao, MD, PhD, Fanghui Zhao, MD, PhD et al. 2023 The Association of University Radiologists. *Elsevier Inc* https://doi.org/10.1016/j. acra.2023.02.026.

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