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What Women Should Know about Breast Density and Cancer Risk

By Julie Grisham, Friday, October 26, 2018



Radiologist Sandra Brennan specializes in breast imaging and minimally invasive biopsies.

Summary

Radiologist Sandra Brennan discusses what is known about the link between breast density and cancer risk and MSK's screening recommendations for women with dense breasts.

In 2009, Connecticut was the first state to pass a law that requires radiologists to notify women who have had **screening mammograms** if they have dense breasts. Since then, more than 30 states have followed suit. Having dense breasts is a risk factor for **breast cancer**.

Breast density has to do with the amount of fibrous and glandular tissue that a woman has in her breasts compared with the amount of fat.

- About 10% of women have extremely dense breasts.
- Around 40% have heterogeneous density, which means their breasts are mostly dense with some areas of fat.
- Another 40% have scattered density, which means they have some areas of density but most areas are not dense.
- Only about 10% of women have breasts that are mostly fatty, with little or no fibrous and glandular tissue.

We spoke with **Sandra Brennan**, Director of Radiology at **MSK Westchester**, about what doctors know about breast density and what steps women with dense breasts can take to increase the likelihood that any cancer they may develop is detected early.

What does it mean when a woman is told that she has dense breasts?

Having dense breasts makes it more difficult for cancer to be picked up by a mammogram. The dense tissue looks white on the image, and that can obscure cancerous masses.

Women with dense breasts also have an elevated risk of breast cancer. The 10% who have the most dense tissue have a risk that's four to six times higher compared with those whose breasts are the least dense. This is because glandular tissue is more likely to become cancerous. But even women with breasts that are mostly fatty can develop breast cancer.

What causes dense breasts?

Mostly it's just part of the natural makeup of your body. Density is affected by age and hormones. Taking hormone replacement therapy will increase breast density, and conversely, taking **tamoxifen (Nolvadex®)**, an estrogen-receptor drug used to treat some types of breast cancer, will decrease it. A woman's breasts may become less dense as she ages. But that doesn't always happen. Sometimes a woman with dense breasts can keep that density even as she gets older.

Is there anything women can do to reduce their breast density?

It's not something you can really change. There are no foods or supplements that make a difference. Some women may have changes in the amount of fat in their breasts if they lose or gain weight. Women with a low body mass index tend to have dense breasts.



Mammograms & Other Types of Breast Exams

Learn about the different types of breast exams that can help detect breast cancer at its earliest stages, before symptoms develop.

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What are the screening recommendations for women with dense breasts?

We know that **3-D mammography**, also known as tomosynthesis, is better at detecting masses in dense breasts than traditional 2-D mammography. This is because it looks at the breasts in visual slices and removes some of the masking effect of the overlying dense tissue. We offer 3-D mammograms as an option for standard screening to all women who get screened at MSK, both in Manhattan and at our regional sites.

Women with dense breasts should discuss with their doctor whether they should have supplemental screening with ultrasound. Screening breast ultrasound can pick up additional cancers that we might not see on a mammogram in women with dense breasts.

For women at a higher risk unrelated to their breast density, we recommend an annual screening with a breast MRI. This may detect small tumors that a mammogram misses. Women at a higher risk include those with inherited mutations in **BRCA1 or BRCA2**, a history of **lobular carcinoma in situ**, a previous biopsy that found atypical tissue, or a history of radiation to the chest wall at a young age. Breast MRIs are not routinely recommended for women with an average risk, including those with dense breasts, because the high number of false positives can lead to unnecessary biopsies.

Why are we hearing more about breast density now?

Radiologists have known about breast density since we began doing mammograms. It came to the public's attention when breast density notification laws were passed. These laws came about largely because of patient activism.

What are some of the screening tests and other services that are available at MSK Westchester?

We offer 2-D and 3-D mammography, screening breast ultrasounds, and breast MRIs. Breast cancer screening services are available to MSK employees and their family members, MSK patients, and women in the community. Any woman who needs a screening mammogram can make an appointment to get one at MSK. We accept outside prescriptions for screening mammography and breast ultrasounds.

For those who need a **breast biopsy**, we perform a number of nonsurgical procedures at MSK Westchester. These include percutaneous ultrasound-guided core biopsies, fine-needle aspirations, stereotactic breast biopsies, and MRI-guided biopsies. People who are having surgery at Memorial Hospital in Manhattan can have their preoperative seed localizations and sentinel node injections done at MSK Westchester.

We are excited that we'll soon be able to offer contrast-enhanced mammography at MSK Westchester. This technique, which gives us a vascular map of the breast, similar to an MRI, was first piloted at MSK's **Evelyn H. Lauder Breast Center** in Manhattan. We are glad to expand that service to the regional sites, including MSK Westchester and **MSK Commack**. It's a very specialized procedure that, to the best of my knowledge, is not available anywhere else in Westchester County.

Comments

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Anita Jenkins

Oct 29, 2018 • 3:35 PM

The biopsy done after the mammogram & sonogram showed atypical cells . and they recommended removal. Can you explain atypical cells, and can they turn cancerous ?? Thank you so much for any information you can offer.

Memorial Sloan Kettering

Oct 29, 2018 • 3:53 PM

Dear Anita, atypical cells are not cancerous but they may increase your risk for developing cancer later in life. We recommend that you discuss next steps with your doctor. If you are interested in coming to MSK for a second opinion or for treatment, you can call **800-525-2225** or go to <https://www.mskcc.org/experience/become-patient/appointment> for more information. Thank you for your comment, and best wishes to you.

Robin Gelman

May 14, 2019 • 10:01 PM

Mskcc has some of the most caring and compassionate doctors I have ever met. As a BRCA2 patient, I have placed my life in the hands of Dr. Tracy Ann Moo and her incredible team with the utmost confidence. MSKCC has enabled me to lead a