



PATIENT INFORMATION

# For the Mammography Patient with Dense Breast Tissue



*Your life is our life's work.*

Mammography has been the cornerstone of early breast cancer detection since the 1980s, with many lives saved through annual screening over the years. Yet, mammograms do not identify all breast cancers.

Traditionally, mammograms have been credited with finding 90 percent of breast cancers. However, this detection rate refers to lumps that can already be felt by the patient or her doctor. When talking about early cancers that cannot be felt, only women with low density mammograms can rely on this 90 percent detection rate. When women with all levels of density are considered, only 70 percent of nonpalpable breast cancers are detected by mammography. And, when we confine the discussion to women with “dense” breast tissue, the detection rate drops below 50 percent.

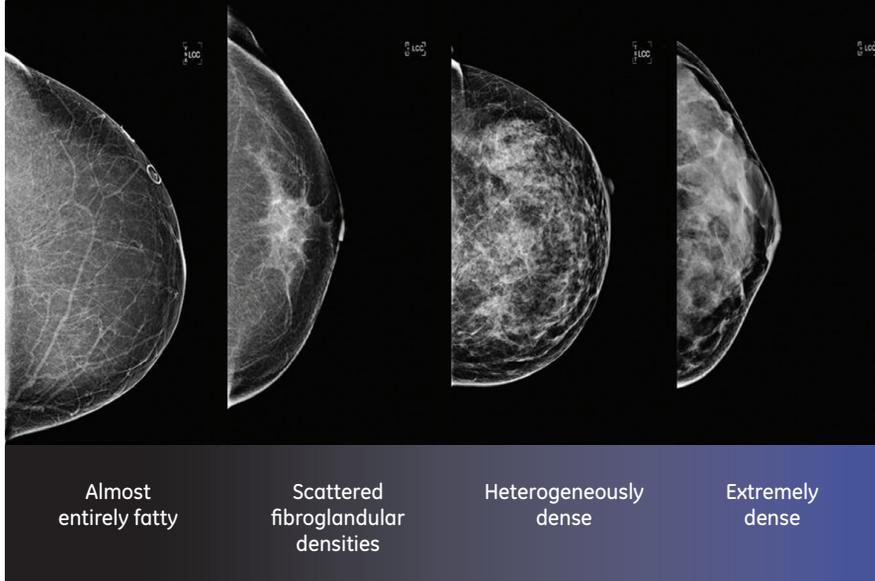
**“Dense breasts”** means that the glandular tissue is white on mammogram, as opposed to the dark gray background that is seen when the breasts are composed mostly of fatty tissue. The problem is that cancer has the same level of whiteness as dense breast tissue. So, the whiter the background, the harder it is to see a cancer. It’s a matter of camouflage.

While you may hear the generalization that young women have dense breast tissue and older women do not, exceptions to this rule are quite common. There are premenopausal women whose low density mammograms are very accurate, and there are many postmenopausal women whose high-density mammograms remain a lifelong problem for early detection.

An additional concern is the fact that breast density is, in and of itself, a risk factor for the development of breast cancer. Women with extremely dense breast tissue are four-fold as likely to be diagnosed with breast cancer as women with low density mammograms. Note, however, that this is a comparison between the extremes of density. If one compares those with very dense breasts to the average woman, then the risk is more in the same 2-fold range as having a first degree relative diagnosed with breast cancer. So, having extremely dense mammograms is double jeopardy - the likelihood of developing breast cancer is higher, while the odds of early mammographic detection are lower.

Radiologists assign a density level to all women undergoing

## Breast Density Classifications



screening mammography, with 4 levels of density labeled as A, B, C or D. Although the classification system has a number of qualitative features included, a simplified translation is that the 4 levels represent quartiles: A (0-25% dense), B (25-50%), C (50-75%), and D (over 75%).

Following the lead from a nationwide awareness campaign, the Missouri legislature passed a law, effective January 1, 2015, requiring breast screening centers to notify those women who have dense breasts, with specific reference to the increased risk of breast cancer, as well as the lower detection rate of cancer

with increasing levels of density. Thus, all women with C or D designations will receive notice. This includes an estimated 40% of the population with Level C density and 10% with Level D density.

**Mercy Breast Center at the forefront:** Legislation should be a last resort in the enforcement of good medical practice. We take pride in the fact that at the Mercy Breast Center in Joplin, we are able to offer ABUS (automated breast ultrasound), which is designed specifically to detect breast cancer in women with dense breast tissue.

## I have Level C or Level D density...so now what?

**Tomosynthesis (3-D mammography)** has been a great help for women with all levels of breast density. That said, the addition of a second modality – **whole-breast ultrasound** or **MRI** – will raise the detection level significantly. While tomosynthesis improves the detection rate by 20-30%, whole breast ultrasound raises the detection rate by 50-60% and breast MRI raises it further still, essentially doubling the detection rate over mammograms alone.

Although we have used **breast ultrasound** for many years for diagnostic purposes, it was cumbersome to screen all the breast tissue on both sides, and even then, there was no way to take a picture of the entire breast at once. Mercy is pleased to announce that we are the first full-service breast screening center in Southwest Missouri to adopt “automated whole breast ultrasound,” called by its acronym ABUS.



## Is ABUS covered by insurance?

While diagnostic ultrasound is always covered by insurance, screening ultrasound in women with dense breasts – as recommended by the Society of Breast Imaging – will need to be handled on an individual basis. The Mercy Breast Center is pleased to offer a discounted cash price for

patients whose insurance will not cover a screening whole breast ultrasound.

**Breast MRI** provides the highest level of cancer detection available, but dense breasts alone do not meet insurance requirements for MRI. Current guidelines for breast MRI are based on calculated risk levels, something best done in Mercy’s formal risk assessment program.



Having a genetic predisposition for breast cancer, or a certain calculated risk level, will qualify for MRI independent of breast density. By combining mammography and breast MRI on a regular basis, the sensitivity for early breast cancer detection is 95%.

Some women, however, don't quite meet the threshold in qualifying for screening MRI (or can't have MRI for some reason). In this case, ABUS is going to be a good alternative, especially if breast tissue is dense.

In summary, when adding a second screening modality to mammography, ABUS is for women with Level C or D density

and no other risk factors (or only modest risks), while breast MRI is for women at very high risk for breast cancer, usually due to a strong family history or a "pre-malignant" biopsy.

### **Is there any reason to screen with all 3 modalities?**

Not all 3 at once. Several studies looked at this possibility and when breast MRI is part of the mix, ultrasound has very little to offer when performed along with MRI. That said, some women who do not qualify for annual MRI, will still opt for MRI screening every 2-3 years in addition to

annual mammograms, while using adjunct ultrasound in those years when MRI is not performed. Mammographers at the Mercy Breast Center incorporate breast density levels as part of the recommended protocol, such that some women screen with a mix of all 3 modalities, but staggered at various intervals depending on risk and density levels.

### **Is Breast MRI covered by insurance?**

When used for appropriate diagnostic purposes, that is, when there is a problem to be worked out, both ultrasound and MRI are covered expenses. However, asymptomatic screening on a routine basis can be a different matter. Insurers are only required (by law) to cover mammographic screening. When it comes to breast MRI, most insurers have guidelines that dictate coverage for certain groups of high-risk women, usually based on a strong family history, with or without a proven genetic predisposition. However, other risk factors can sometimes generate calculated risk levels that will qualify patients for regular screening with MRI.

It is often helpful to undergo a formal risk assessment so that a wide variety of breast cancer risks can be considered and calculated using mathematical models, possibly allowing insurance coverage for multi-modality screening. Mercy offers risk assessment and genetic testing for women appropriate for these tests.

Included in the process of risk analysis is the determination of candidacy for adjunct breast imaging. If it appears your insurance is not going to cover MRI screening, the Mercy Breast Center will be please to assist by offering a discounted cash price. As an alternative, patients with modest risk elevations might want to consider ABUS (whole breast ultrasound), especially if their breast tissue is dense.

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