

3D Digital Mammography

Three-dimensional images can improve early detection of breast cancer in women with dense breasts thanks to wide angles and greater image detail for your provider

What is 3D Mammography?

Mammography is a noninvasive type of imaging that uses a low-dose X-ray system to examine changes in breast tissue. Standard mammograms only produce images in the two-dimensional space, while 3D mammography (also called tomosynthesis) creates a three-dimensional image by moving the X-ray tube in an arc over the breast. This creates a series of thin images known as "slices" that your provider can scroll through for a comprehensive 3D overview.

Early Detection: The First Step Toward Healing

Around one in eight American women will be diagnosed with breast cancer - the most common form of cancer in women - in their lifetime. Because breast cancer *does not* present any symptoms during its early stages, when the tumor is still small and the risk of it spreading throughout the body is significantly lower, providers recommend **annual screening examinations after the age of 40** to ensure detection as soon as possible. If you have a history of breast cancer, screening should begin before the age of 40. Talk to your provider.

A physical breast examination performed by a healthcare provider is the most common form of screening. If your provider detects a change in your breast tissue, such as thickening or a lump, during a physical exam, they will refer you for a mammogram.

Preparing for Your Mammogram

- Inform your provider of any new findings or problems in your breasts and discuss family or personal history of breast cancer.
- Do not wear deodorant, talcum powder or lotion under your arms or on your breasts on the day of the exam. These can appear on the mammogram as calcium spots.
- If possible, obtain prior mammograms and make them available to your radiologist at the time of the current exam.

During Your Mammogram

During a screening, the breast is positioned between the X-ray tube and a detector and, for a short time while the image is being taken, carefully pushed down with a compression plate. This is necessary in order to get a conclusive, high-quality image. The exam is tailored to each patient, with the machine stopping as soon as optimal breast compression is achieved.

A recent study shows that 3D mammography can detect 34% more cancers compared to traditional mammography.¹

1 Lund University via Science Daily. <https://www.sciencedaily.com/releases/2018/10/181015100448.htm>

Diagnosis

The images taken during the exam identify microcalcification, tiny calcium deposits which can be caused by harmless inflammation or which can indicate a growing, malignant tumor.

Most breast tissue changes are benign and easy to treat, including benign breast lumps, which can be cysts filled with fluid or thick tissue caused by menstruation. Determining the kind of tumor (benign or malignant) and its progression is an important diagnostic step—and the basis for the best possible treatment.

Breast Density – What You Should Know

What is dense breast tissue?

Your breasts are made up of different tissues, including:

- **Lobules** (also called glandular tissue), which produce milk
- **Ducts**, which are the tiny tubes that carry milk from the lobules to the nipple
- **Fibrous connective and fatty tissue**, which give breasts their size and shape and hold the glandular tissue in place

Dense breasts have a lot of fibrous or glandular tissue but not much fatty tissue. Some women have denser breast tissue than others. For most women, breast density decreases with age. But in some women, there is little change. Many women have dense breasts, and it's not abnormal.

Why is breast density important?

Having dense breast tissue is linked to an increased risk of breast cancer incidence. In addition, dense breasts make it more difficult to spot tumors that can be hidden behind this dense tissue. Because of the improved image quality when scanning dense breasts, **3D mammography** like that available at Floyd Valley Healthcare may be able to detect more cancers than traditional mammography.

Comfortable and Reliable 3D Exams

- Enables detection of tumors hidden by overlapping breast tissue thanks to high-depth resolution and high-quality images
- Provides more accurate diagnosis than standard 2D digital mammography
- Addresses imaging challenges related to dense breasts

Improved patient comfort and safety

- Automatically selects the **lowest radiation dose** for individual breast characteristics — reducing overall dose by up to 30 percent
- Achieves excellent image quality to help your provider make a more confident and informed diagnosis, **regardless of breast size or tissue density**

A Quality Image is Everything When Detecting Breast Cancer

Early detection of breast cancer is critical. With 3D mammography available at Floyd Valley Healthcare, our team of experienced women's health experts have a valuable tool in the fight against cancer.

Designed with your comfort in mind, our 3D mammography system supports our technologists in making mammograms as quick and comfortable as possible. Our 3D system means fewer patients are recalled for additional imaging.

For questions or to schedule an exam, contact your provider or call 712-546-3394.