

Denita Young
County Extension Agent - FCS
Rains County

What Is the Difference between Digital and Film Mammography?

Breast cancer is the second leading cause of cancer-related deaths in women in the United States, behind lung cancer. It is also the most common type of non-skin cancer in women. Because of these facts, it is vital that women participate in regular mammography screenings to ensure early detection of breast abnormalities, if any. In recent years, various studies have shed light on a new type of mammography, called digital mammography, and the benefits it can provide some women when compared to traditional film mammography. Although both film and digital mammography use X-rays to produce an image of the breast and the actual procedure of positioning and compressing the breast for examination are identical, there are several differences between these two types of mammography that should be noted.

Film mammography, which has been successfully used as a screening tool for breast cancer for 35 years, uses film to produce an image of the breast. Even though film mammography is considered a very good screening tool for detecting irregular breast characteristics, studies have revealed that film mammography is less sensitive for women who have dense breasts. Perhaps the most limiting issue with film mammography is the film itself. Once an image of the breast has been created on the film, it cannot be significantly altered, magnified, or brightened, which would allow a better assessment of the image.

Digital mammography, first approved by the Food and Drug Administration (FDA) in 2000, takes an electronic image of the breast and uses a computer to store that image. This electronic method allows images to be stored and shared more easily than film mammography. Images created by digital mammography can be modified in any way; for example, images can be enhanced or brightened for further evaluation. Digital mammography uses less radiation when compared with film mammography, lowering the dose of radiation exposure in women; however, women with larger breasts may require several additional exposures. The main limitation of digital mammography is the cost; current digital systems can cost about 1.5 to 4 times more than film systems. If your doctor recommends you have a digital mammogram, it would be wise to check with your insurance company (or if you do not have insurance, check with the business doing the mammogram) to see if there is a difference in cost of a digital mammogram to you personally.

In 2001, a study trial, called the Digital Mammographic Imaging Screening Trial (DMIST), was conducted by the American College of Radiology Imaging Network. Key findings from this study suggest that digital mammography was significantly better in screening women who fit any of these three categories:

under age 50 (no matter what level of breast tissue density they had),
of any age with heterogeneously (very dense) or extremely dense breasts, or
pre- or peri-menopausal women of any age (defined as women who had a last menstrual period within 12 months of their mammograms).

According to the study, women who fit into ANY of the above categories may benefit from digital rather than film mammography. However, the study showed no benefits from digital mammography in women who are over age 50, do not have dense breasts, or those who are no longer menstruating.

So what should you do? Talk with your doctor to determine if you would benefit from digital mammography. Breast density is best determined by asking your doctor, since prior mammograms will have provided that information.

If you and your doctor decide you are a good candidate for digital mammography, do not delay your next mammogram until a digital mammogram is available. It is important to continue to have your regularly scheduled mammograms, regardless of the type. Also, women should not receive an extra mammogram because of these trial results. The National Cancer Institute recommends that if a woman has had a mammogram in the last year and she has no breast abnormalities or symptoms, she should undergo her next screening mammogram only when she is due for one – not earlier than she would ordinarily be scheduled.

Death rates due to breast cancer continue to decline, and these decreases are believed to be the result, in part, of earlier detection along with improved treatment. Therefore, it is important to participate in regular screening activities as a part of a healthy lifestyle. In addition to annual mammography screenings beginning at age 40, two other important steps in early detection include clinical breast exams and being aware of any changes in your breast and promptly reporting them to your doctor.

For more information, please consult www.cancer.gov. or contact the Texas AgriLife Extension Service office at 903-473-5000, ext. 160.

The information herein is for educational purposes only. References to commercial products or trade names is made with the understanding that no discrimination is intended or no endorsement by the Texas AgriLife Extension Service is implied.

Extension programs serve people of all ages regardless of socioeconomic level, race, color, sex, religion, disability or national origin.

The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Courts of Texas Cooperating.

