

## Understanding Digital Mammography



### **What is digital mammography and how does it differ from conventional film mammography?**

Digital mammography is a means of acquiring x-ray images without the use of x-ray film. Specialized detectors, which are used in place of x-ray film, convert the x-rays into digital information. The digital image of the breast can be viewed on a computer workstation with high resolution monitors, whereas with conventional mammography the x-ray films would need to be developed and then viewed on a lighted view box.

### **Is digital mammography better than film-screen mammography at detecting breast cancer?**

The results of a major clinical study of nearly 50,000 women (The American College of Radiology Imaging Network's Digital Mammographic Imaging Screening Trial, or ACRIN-DMIST) showed that digital mammography is more accurate than conventional film-screen mammography in detecting breast cancer in three groups of women: women under 50, pre- and peri-menopausal women, and women with dense breasts. Digital mammograms are 15 percent more accurate among women under age 50 or not yet in menopause, and 11 percent more accurate among women with dense breasts, the study found.

### **What are dense breasts?**

Dense breasts contain more glands and ligaments -- and less fat. Dense breast tissue appears as a solid white area on a mammogram. Tumors also are dense and appear as solid white areas on mammograms. This can make it difficult to detect a tumor because it looks a lot like the dense tissue around it. Young women are more likely to have dense breasts than older women. After menopause, breast tissue tends to lose density and contain more fat.\*

### **What are the advantages of digital mammography?**

DMIST demonstrated that digital mammography offers benefits to a portion of the screening population, as mentioned above. Additionally, digital mammography enables the technologist to immediately see if the image was taken correctly. This frees the patient from waiting until films are developed or from being called back for additional x-ray exposures after they've gone home.

Mammography images can be displayed on a computer workstation and monitor, allowing the radiologist to magnify and adjust the contrast of the image or optimize a particular area. This can reduce the number of extra images and exposures that are sometimes required during the diagnostic process. Moreover, since the images can be stored and retrieved electronically, it is easy to facilitate long-distance consultations with other mammography specialists.

### **Is digital mammography available everywhere?**

While more than 8,500 imaging centers across the country are approved under the federal Mammography Quality Standards Act (MQSA) to provide mammograms, only about 10 percent of those facilities currently offer digital technology.



**Should women who do not have access to digital mammography wait for it to become available, or get a conventional film-screen mammogram?**

Women should not wait for digital technology. Mammography is still the best screening tool for the detection of breast cancer. Screening guidelines recommend getting a mammogram every year, beginning at age 40. Women should talk with their doctor and get the best advice for them.

**What about radiation dose?**

According to DMIST, digital mammography offers reduced average radiation dosage over film mammography, without a compromise in diagnostic accuracy.

**Is compression of the breast still required with digital mammography?**

From the patient's perspective, the *procedure* for a mammogram with a digital system is the same as for conventional mammography.

**What HVRA locations offer digital mammography?**

HVRA currently offers digital mammography at its Danbury office. Digital mammography will soon become available at HVRA's Southbury office as well.

Source: <http://www.mayoclinic.com/health/mammogram/AN01137>



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