

# Digital mammography delivers significantly less radiation than conventional mammography

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Data from one of the largest mammography trials in history demonstrates that overall the radiation dose associated with digital mammography is significantly lower (averaging 22 percent lower) than that of conventional film mammography and that the reduction could be greater in women with larger and denser breasts, according to a study published in the February issue of the *American Journal of Roentgenology*.

"The ability to reduce the radiation dose for many [women](#) is another step forward for breast cancer screening with mammography — which saves thousands of lives each year," said R. Edward Hendrick, PhD, lead author of the study.

The American College of Radiology Imaging Network (ACRIN) Digital Mammographic Imaging Screening Trial (DMIST) published in 2005, enrolled 49,528 women and found that digital mammography detected significantly (up to 28 percent) more cancers than film mammography in women younger than 50 years of age, premenopausal and premenopausal women, and women with dense breasts.

In this latest DMIST study, published in AJR, technical data from 5,102 DMIST participants were evaluated, demonstrating that the dose received by women imaged with digital mammography was significantly lower than that received by the same women imaged with standard film

mammography.

"The average breast radiation dose per view was 2.37 mGy for film mammography and 1.86 mGy for digital (22 percent lower for digital than film mammography)," said Hendrick.

Digital mammography is similar to conventional except with digital, X-ray images are collected on a digital detector and stored on a computer rather than being collected and stored on film. "While the radiation dose from both film and digital mammography are low, further dose reduction is an added benefit of digital mammography over and above its ability to better detect cancers in women with dense breasts," said Hendrick.

Access to digital mammography continues to increase. More than 60 percent of U.S. breast imaging facilities offer digital mammography and more are acquiring digital services each month. "As [digital mammography](#) has now been shown to significantly lower the [radiation dose](#), it is likely that access to it will continue to grow," said Hendrick.

Provided by American College of Radiology

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