

## Study: US Breast Cancer Detection Rate Comparable to Mammography



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A new study shows that breast cancer detection rate with ultrasound (US) is comparable with mammography, with a greater proportion of invasive and node-negative cancers among US detections. The findings, published in the *Journal of the National Cancer Institute (JNCI)*, have led researchers to advise that US should be considered when testing for the disease.

Deaths from breast cancer are increasing worldwide, with 425,000 deaths in 2010, including 68,000 in women age 49 years or younger in developing countries. While mammography is an effective method in detecting breast cancer in developed countries, it is not commonly available in less developed nations, and alternative methods, such as ultrasound, need to be tested.

To determine the effectiveness of using ultrasound to detect breast cancer, Wendie A. Berg, MD, PhD, Department of Radiology, Magee-Womens Hospital, and colleagues recruited 2,809 women across 20 different sites in the United States, Canada, and Argentina to the American College of Radiology Imaging Network protocol 6666 breast cancer screening study. Participants were asymptomatic women with heterogeneously or extremely dense breast tissue in at least one quadrant and at least one other risk factor for breast cancer. Of the participants, 2,662 completed three annual breast screenings by US and film-screen or digital mammography, and then had a biopsy or a 12-month follow-up.

In ACRIN 6666, screening US was performed and interpreted independently of mammographic results. The researchers found that the number of US screens to detect breast cancer was comparable to that of mammography, and found that there was a greater proportion of invasive and node-negative cancers in those who had US. According to the researchers, a larger study is needed to statistically support greater sensitivity of US to invasive cancers.

The study also showed a greater number of false-positives among the women screened with US. Although the false-positive rate of US exceeds that of mammography, the number of women recalled for extra testing becomes more comparable on incidence screening rounds, the authors write.

"Where mammography is available, US should be seen as a supplemental test for women with dense breasts who do not meet high-risk criteria for screening MRI and for high-risk women with dense breasts who are unable to tolerate MRI," the authors conclude.

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Published on : Mon, 28 Dec 2015