Ultrasound could offer affordable, accessible breast cancer screening

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Ultrasound screening could be a more affordable and convenient way to detect early breast cancers in women, especially for those in countries where there is little access to mammograms, according to University of Pittsburgh School of Medicine research presented today at the annual meeting of the Radiological Society of North America in Chicago. These results are a component of a multinational study that looked at ultrasound as an adjunct to screening mammography.

Researchers, led by Wendie Berg, M.D., Ph.D., professor of radiology at Pitt, and practicing radiologist at Magee-Womens Hospital of UPMC, reviewed data from the Avon Foundation for Women and National Cancer Institute-sponsored ACRIN 6666 study, which found that the addition of a screening ultrasound or magnetic resonance imaging test to annual mammograms was associated with a breast cancer detection benefit for women. Dr. Berg's team evaluated the data from the perspective of using ultrasound as the primary screening method, taking into consideration cancer detection, patient recalls, the number of biopsies performed, and whether those biopsies showed breast cancer.

"We found that breast cancer detection with ultrasound alone compares quite favorably to mammography alone, and was actually better at detecting early invasive breast cancers," said Dr. Berg. "Ultrasound screening could be a viable option, particularly in countries where ultrasound is readily available but access to mammography is limited."

In the ACRIN 6666 study, 2,662 participants enrolled at 21 sites in the

U.S., Canada and Argentina completed three annual rounds of mammography screening followed by whole breast ultrasound screening, with a 12-month clinical follow-up in the fourth year. Ultrasound screening picked up 53 percent of all breast cancers, as did mammography screening. More importantly, invasive breast cancers constituted the vast majority of cancers detected by ultrasound. Screening ultrasound, however, did result in more false positive results than mammography.

"We designed our study so that women had independent mammograms and screening ultrasound exams," Dr. Berg said. "The primary goal was to examine ultrasound done in addition to mammography but we now have analyzed the data as if ultrasound were the only test performed."

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