Tomosynthesis increases breast cancer detection rate

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2D plus 3D breast imaging increases cancer detection rates by 11%, and could be particularly useful in detecting cancer in women with dense breasts, a new study suggests.

Researchers at Yale University Smilow Cancer Hospital in New Haven, CT, reviewed the screening mammograms of 14,684 patients. Forty-two cancers were found in 8,769 patients who had only 2D imaging (a cancer detection rate of 4.8 per 1,000), said Dr. Jaime Geisel, a lead author of the study. Thirty-two cancers were found in the group that had 2D plus 3D (tomosynthesis) imaging, for a cancer detection rate of 5.4 per 1,000, said Dr. Geisel. The percent of invasive and intraductal cancers detected among the two groups was similar, she said.

In addition to the improved cancer detection rate, "of the patients who had cancer detected with 3D, 54% had dense breasts. Of the patients who had cancer detected with 2D only, 21% had dense breasts. This suggests better performance of the 3D in dense breast tissue given 3D was offered to patients regardless of breast density or risk factors," Dr. Geisel said.

Dr. Geisel noted that the majority of screening mammograms at her facility now includes 3D imaging.

"I am hopeful that my study will help raise awareness among physicians as well as women undergoing breast cancer screening," she said. Additional research needs to be done; "We recognize the numbers are

still too small to draw significant conclusions, but the data is compelling," she said.

Dr. Geisel will present her study at the ARRS annual meeting on April 19 in Washington, DC.

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