

Tomosynthesis ups accuracy of digital mammography

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Image courtesy of Blausen Medical

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(HealthDay)—Using a combination of tomosynthesis, which produces a three-dimensional reconstruction of the breast, with digital mammography increases radiologists' diagnostic accuracy and significantly lowers the number of recalls for non-cancer cases, according to research published in the January issue of *Radiology*.

Elizabeth A. Rafferty, M.D., of Massachusetts General Hospital in Boston, and colleagues conducted a multicenter, multireader trial involving 1,192 women who had mediolateral oblique and craniocaudal digital mammographic and tomosynthesis images taken of both breasts. Radiologists' diagnostic accuracy and recall rates were compared for tomosynthesis and mammography versus mammography alone.

The researchers found that adding tomosynthesis to [digital mammography](#) significantly increased diagnostic accuracy for all 27 radiologists who read images. Additionally, the recall rates were significantly reduced with the addition of tomosynthesis to digital mammography. Finally, the sensitivity of the combined approach was most improved for invasive cancers, which improved by 15 to 22 percent, compared with in situ cancers, which was associated with a 3 percent increase in sensitivity.

"In conclusion, the addition of tomosynthesis to digital mammography offers the dual benefit of improved [diagnostic accuracy](#) and significant reduction in false-positive recall rate thereby avoiding unnecessary additional testing and decreasing attendant anxiety, inconvenience, and cost for women," the authors write.

Several authors disclosed financial ties to the medical device industry. One author provides expert testimony in malpractice cases.

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