

Comparison of Digital Mammography Alone and Digital Mammography Plus Tomosynthesis in a Population-based Screening Program



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For complete findings, please click here <http://radiology.rsna.org/content/early/2013/01/01/radiol.12121373.full>

OBJECTIVE

This study was performed to assess cancer detection rates and false-positive rates before arbitration, positive predictive values for women recalled after arbitration, and the type of cancers detected with use of digital mammography alone and digital mammography combined with tomosynthesis in a large prospective screening trial

MATERIALS AND METHODS

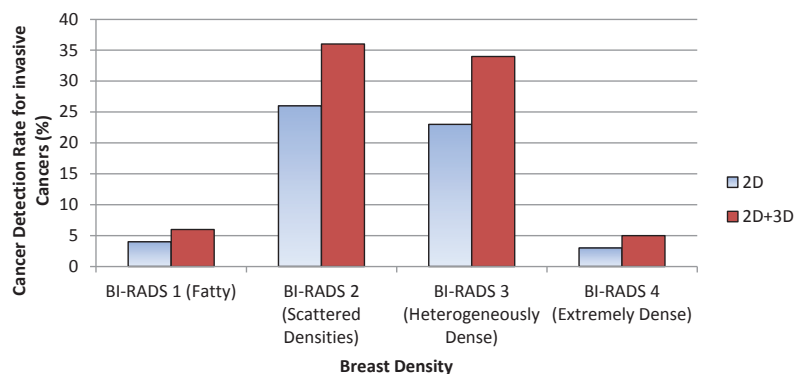
12631 women who gave written consent from November 22, 2010 to December 31, 2011 participated in this prospective screening study. An interim analysis of results from these examinations was performed and the results were independently read and interpreted by four different radiologists. These examinations were interpreted by using digital mammography alone and digital mammography plus tomosynthesis

FINDINGS

	Digital Mammography alone: number/1000 women screened	Digital Mammography plus Tomosynthesis: number/1000 women screened	Relative Change: adjusted for reader
False-positive rate before arbitration	61.1	53.1	↓15%
Cancer Detection Rate (invasive and in-situ cancers)	6.1	8.0	↑27%
Cancer Detection Rate (invasive cancers)	4.4 (56 detected)	6.4 (81 detected)	↑40% (25 additional)

CONCLUSION

The authors concluded that the addition of tomosynthesis to digital mammography in the screening population resulted in a significant increase in cancer detection rate, particularly for invasive cancers, and a simultaneous significant decrease in false-positive rate. The increase was observed across all breast densities.



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