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NEWS

RSNA Press Release

Digital Mammography Superior to Film Mammography in Some Cases

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At A Glance

- Women who are under age 50, pre- or perimenopausal and have dense breasts should be screened with digital mammography, according to the results of a study of 42,760 women.
- The Digital Mammographic Imaging Screening Trial (DMIST) included 33 centers in the U.S. and Canada.

OAK BROOK, Ill. - For some women, digital mammography may be a better screening option than film mammography, according to newly published results from the Digital Mammographic Imaging Screening Trial (DMIST). The results appear in the February issue of *Radiology*. The study found that digital mammography performed better than film mammography for pre- and perimenopausal women under age 50 with dense breasts.

"We looked at a cross-section of characteristics," said DMIST principal investigator, Etta D. Pisano, M.D., Kenan professor of radiology and biomedical engineering at the University of North Carolina School of Medicine in Chapel Hill. "This paper confirms that if you are under 50, pre- or perimenopausal, and have dense breasts, you should definitely be screened with digital rather than film."

DMIST enrolled 49,528 women at 33 centers in the U.S. and Canada. The women underwent both digital and film mammography. Breast cancer status was determined for 42,760 women.

"The original DMIST results showed that digital was statistically similar to film in the overall screening population but performed better than film in pre- and perimenopausal women under 50," Dr. Pisano said.

For this paper, the researchers sought to retrospectively compare the accuracy of digital mammography versus film mammography in subgroups defined by combinations of age, menopausal status and breast density, using either biopsy results or follow-up information.

They compared results in 10 different subgroups of women: pre- and perimenopausal women under age 50 with fatty breasts, pre- and perimenopausal women under age 50 with dense breasts, postmenopausal women under 50 with fatty breasts, postmenopausal women

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under 50 with dense breasts, pre- and perimenopausal women between the ages of 50 and 64 with fatty breasts, pre- and perimenopausal women age 50 to 64 with dense breasts, postmenopausal women age 50 to 64 with fatty breasts, postmenopausal women age 50 to 64 with dense breasts, women over age 65 with fatty breasts and women over 65 with dense breasts.

The results confirmed the trial's original findings in favor of improved diagnostic accuracy of digital mammography over film for pre- and perimenopausal women under 50 years old with dense breasts. The findings also showed a trend toward improved diagnostic accuracy of film over digital mammography for women over 65 with fatty breasts. However, this finding was not statistically significant, and further investigation is needed to determine the reason that film performed slightly better in this subgroup. For other groups evaluated, there was no significant difference.

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"Diagnostic Accuracy of Digital versus Film Mammography: Exploratory Analysis of Selected Population Subgroups in the Digital Mammographic Imaging Screening Trial (DMIST)." Collaborating with Dr. Pisano on behalf of the DMIST Investigators Group were R. Edward Hendrick, Ph.D., Martin J. Yaffe, Ph.D., Janet K. Baum, M.D., Suddhasatta Acharyya, Ph.D., Jean Cormack, Ph.D., Lucy Hanna, M.S., Emily F. Conant, M.D., Laurie L. Fajardo, M.D., Lawrence W. Bassett, M.D., Carl J. D'Orsi, M.D., Roberta A. Jong, M.D., Murray Rebner, M.D., Anna N.A. Tosteson, Sc.D., and Constantine A. Gatsonis, Ph.D.

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