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NEWS

RSNA Press Release

International Trial Finds Benefits of Breast MRI in Women at High Risk

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At A Glance

- MRI helps detect breast cancers not found by mammography or clinical breast exam.
- This is the first multi-institutional, international study comparing screening mammography with MRI in high-risk women.
- As many as 50 percent of women in certain high-risk subgroups will develop breast cancer before age 50.

CHICAGO - Magnetic resonance imaging (MRI) enables radiologists to accurately identify tumors missed by mammography, according to the first international, multicenter trial comparing the two screening methods in women at high-risk for breast cancer. The findings of the International Breast Magnetic Resonance Consortium (IBMC) Trial were presented today at the annual meeting of the Radiological Society of North America (RSNA).

"We want to find a screening modality that can improve detection in high-risk young women, including those with dense breast tissue," said presenter Constance Dobbins Lehman, M.D., Ph.D., assistant professor and director of breast imaging at the University of Washington Medical Center, Seattle Cancer Care Alliance.

The medical community has been trying to determine the best screening method for women genetically at high risk for developing breast cancer. According to Dr. Lehman, as many as 50 percent of certain high-risk subgroups will develop breast cancer before the age of 50. Mammography performs very well for the general population but is not optimal for imaging dense breast tissue. Women at genetically high risk need to be screened at a younger age, when they are more likely to have dense breast tissue.

Researchers at 13 sites studied 367 women over age 25 (mean age 45) with at least a 25 percent lifetime risk of breast cancer to compare screening performance of MRI and mammography in high-risk patients. Each of the women underwent MRI, mammography and a clinical breast exam.

The researchers found that MRI had a 1.1 percent diagnostic yield, and mammography had a 0.3 percent diagnostic yield, meaning that MRI would detect 11 cancers in 1,000 high-risk women while mammography would detect three.

"MR findings resulted in 6 percent of women with a negative mammogram and a negative clinical breast exam being recommended for biopsy," she continued. "Three additional cancers were detected in those women."

Women who undergo screening mammography have a significantly lower risk of dying from breast cancer, according to Dr. Lehman. The American Cancer Society recommends that women at high risk talk to their doctors about the potential benefits and risks of screening with MRI or ultrasound as a supplement to mammography.

Dr. Lehman noted that there is no evidence that MRI is an effective complement to mammography in average risk women. "Although MR is a very powerful tool for detecting cancer, it is not perfect," she said. "There are benign areas of breast tissue that can look suspicious but do not represent breast cancer and yet may lead to a biopsy."

This study was funded by a grant from the National Cancer Institute.

Dr. Lehman's co-authors are Jeffrey D. Blume, Ph.D., Paul Weatherall, M.D., David Thickman, M.D., Nola Hylton, Ph.D., Ellen Warner, M.D., Etta Pisano, M.D., Gia A. DeAngelis, M.D., Paul Stomper, M.D., Eric L. Rosen, M.D., Michael O'Loughlin, M.D., Steven Harms, M.D., David A. Bluemke, M.D., Ph.D., Stuart J. Schnitt, M.D., Constantine Gatsonis, Ph.D, and principal investigator Mitchell Schnall, M.D., Ph.D. Dr. Schnall is from the University of Pennsylvania.

Abstract:	• The Added Cancer Yield of MRI in Screening Women at High Risk for Breast Cancer: Results of the International Breast Magnetic Resonance Consortium (IBMC) Trial

Image (.JPG format)

This breast MRI shows a 46-year-old woman with 8×3×3 linear focus of enhancement in left breast at 6:00, negative on mammography and screening ultrasound. Pathology proven infiltrating ductal carcinoma.

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