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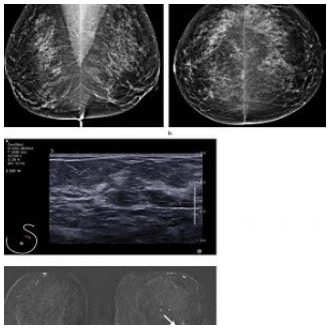
Study: MRI as Supplemental Breast Cancer Screening Tool



With new findings about MRI's ability to improve early diagnosis of breast cancer in all women – not only those at high risk – researchers in Germany say MRI can serve as a useful supplemental screening tool for women at average risk, especially those with dense mammographic tissue. The results are published in the journal Radiology.

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Breast MRI is recommended for women who have a strong family history or other specific breast cancer risk factors. MRI screening has not been considered necessary for women at average risk, and there has been resistance to expansion of MRI into this population due, in part, to concern over higher costs.

The new study, conducted between 2005 and 2013, assessed breast MRI's impact on 2,120 women, ages 40 to 70, with less than a 15 percent lifetime risk of breast cancer. The women had normal screening mammograms and, in the case of those with dense breast tissue, normal screening ultrasound. Breast MRI detected 60 additional breast cancers, including 40 invasive cancers, for an overall supplemental cancer detection rate of 15.5 per 1,000 women. Of the 60 cancers detected in the study group over the observation period (7,007 screening rounds), 59 were found only using MRI, one was found also by mammography, and none by mammography or ultrasound alone.

Notably, the results also demonstrated the ability of MRI in the detection of more aggressive types of cancer. This ability is especially important in women with dense breast tissue in which aggressive cancers may be missed on mammography. Left undetected, these cancers will grow to become clinically palpable cancers, also known as interval cancers, which are the main driver of breast cancer mortality, according to the researchers.

The new study shows that, consistent with previous research, breast MRI can depict these rapidly growing cancers with high reliability. "The interval cancer rate in our study was zero percent. Not a single cancer was undetected that became palpable," says lead author Christiane Kuhl, MD, chair of the Department of Radiology at RWTH Aachen University in Germany. "This suggests that MRI finds breast cancers that also mammography would find, but MRI detects them earlier, and it finds the cancers which, if MRI had not been done, would have progressed to interval cancers."

Source: Radiological Society of North America
Image Credit: Radiological Society of North America

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