

3T MRI detects 'early' breast cancer not seen on mammography and sonography

May 5 2009

3T MRI, a powerful tool for evaluating patients with a high risk of having breast cancer, can detect a significant number of lesions not found on mammography and sonography, according to a study performed at the University of Toledo Medical Center, Toledo, OH.

The study included 434 women who underwent mammography, sonography and 3T MRI for the detection of malignant breast lesions—all women were at high risk. Results showed that 3T MRI detected 66/66 malignant lesions; mammography detected 54/66 malignant lesions; and sonography detected 57/66 malignant lesions. "3T MRI depicted a significantly higher number of malignant tumors of the breast than mammography and sonography," said Haitham Elsamaloty, MD, lead author of the study.

"Our study detected 'early' [breast cancer](#) (lesions as small as 4 mm) in size and also identified malignant lesions that were only detected by MRI and confirmed by MRI guided [biopsy](#). These crucial findings led to a significant change in patient management in 18.2% of the cases in our study.

"Our study suggests an important role for 3T MRI in such high risk groups for an early diagnosis of [breast cancer](#) and better accuracy in evaluating the extent of disease—a crucial factor in appropriate therapy planning," said Dr. Elsamaloty.

"High field strength (3T) MRI systems are becoming increasingly

available in the clinical setting and more of them are being used for the evaluation of breast malignancy. [3T MRI](#) is an important addition to [mammography](#) and sonography," he said.

Source: American Roentgen Ray Society

Citation: 3T MRI detects 'early' breast cancer not seen on mammography and sonography (2009, May 5) retrieved 22 February 2023 from <https://medicalxpress.com/news/2009-05-3t-mri-early-breast-cancer.html>

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