

Elastography helps identify patients who need biopsy

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A new ultrasound technique is proving valuable in distinguishing malignant from benign breast lesions in some patients – results that could mean fewer unnecessary breast biopsies, a new study shows.

The study found that ultrasound elastography, which indicates tissue softness, can help predict cancer in patients with BI-RADS category 4 masses. "Because malignant tumors predominantly are harder than benign tissues, this technique significantly improves the differentiation between benign and malignant tissue" said Hiroko Satake, MD, lead author of the study. Dr. Satake is from Nagoya University School of Medicine in Japan.

"In an analysis of 115 breast masses that were recommended for biopsy (they were categorized as either BI-RADS 4 or BI-RADS 5), ultrasound elastography was 79% accurate in identifying cancer," Dr. Satake said.

"By accurately identifying benign tumors with imaging, we may be able to avoid sending patients for unnecessary biopsies," Dr. Satake said. Ultrasound elastography provides radiologists with elasticity scores, with lower scores meaning that the mass contains softer tissue. "Based on the results of our study, we recommend that patients with BI-RADS 4 masses should undergo [biopsy](#) if their ultrasound elasticity score is 4 or 5," Dr. Satake said.

Dr. Satake notes that ultrasound elastography should be used as an adjunct to standard sonography and dynamic contrast-enhanced MRI,

which are currently being used to classify [breast](#) lesions based on the standard BI-RADS categorizations.

The study appears in the January, 2011 issue of the *American Journal of Roentgenology*.

Provided by American College of Radiology

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