

Ultrasound can help low-risk patients avoid invasive thyroid biopsy

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The prevalence of benign thyroid nodules is high and there are certain ultrasound features, suggesting malignancy, that can help radiologists determine whether or not a biopsy is needed, according to a study performed at the University of California San Francisco Medical Center, San Francisco, CA.

A total of 245 patients (54 patients with cancer, 191 patients with no cancer) were analyzed. "Our study supports previous data showing that some sonographic features of thyroid nodules are suggestive of malignant nature and should lead to biopsy," said Dorra Sellami, MD, lead author of the study. "These features include microcalcifications (which increase the risk of cancer 16 folds), a shape taller than wide (increases the risk of cancer 3.7 folds) and hypoechogenicity (two-fold increase in risk of cancer). Other features may suggest that a nodule is benign, such as hyperechogenicity (40% increase in risk of cancer)," she said. "Current clinical guidelines recommend biopsy of all lesions greater than or equal to 10 mm. However, in our study of patients with no [thyroid cancer](#), 49% had at least one nodule greater than or equal to 10 mm," said Dr. Sellami.

"Very few thyroid nodules are obviously malignant or benign. Most thyroid nodules we see by ultrasound are indeterminate, and in order to rule out cancer, a fine needle aspiration is often recommended. This results in a ratio of ten benign nodules sampled for one cancer diagnosed," she said.

"Our findings will help radiologists and clinicians determine which nodules are definitely not suspicious and can be watched. I think that our study is one step toward decreasing the number of invasive procedures in patients with benign thyroid nodules—while maintaining the same vigilance in detecting thyroid [cancer](#) in its early stages," said Dr. Sellami.

More information: This study will be presented at the 2009 ARRS Annual Meeting in Boston, MA, on Monday, April 27.

Source: American Roentgen Ray Society

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