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## Targeted breast ultrasound can reduce biopsies for women under 40

CHICAGO – Targeted breast ultrasound of suspicious areas of the breast, including lumps, is a safe, reliable and cost-effective alternative to invasive biopsies for women under age 40, according to the findings of two studies presented today at the annual meeting of the Radiological Society of North America (RSNA).

"By performing high-quality breast ultrasound, we can reduce the number of expensive and avoidable invasive diagnostic procedures in young women," said senior author Constance D. Lehman, M.D., Ph.D., professor and vice chair of radiology at the University of Washington and director of imaging at the Seattle Cancer Care Alliance. "We don't want to be overly aggressive with this population."

The researchers conducted two studies in which targeted ultrasound was used to distinguish between potentially cancerous masses and benign findings in young women who had detected breast lumps or other focal (specific) areas of concern in their breasts. The first study included 1,123 ultrasound examinations of women under age 30, while the second included 1,577 ultrasound examinations of women ages 30 to 39.

Across both studies, all instances of cancer at the site of the clinical concern were positively identified through targeted ultrasound. In addition, all negative ultrasound findings correctly identified benign changes in the breast. The only malignant mass not identified by ultrasound was an unsuspected lesion outside of the targeted examination area. That cancer was identified by a full breast mammogram.

The incidence of malignancy among women in their 30s was 2 percent. The incidence of malignancy among women younger than 30 was 0.4 percent.

"Surgical excision or needle biopsy of tissue can be painful, expensive and frequently unnecessary in these age groups, which have very low rates of malignancies," Dr. Lehman said. "In most cases, monitoring with targeted ultrasound is a very safe alternative."

She added that ultrasound should be the diagnostic tool of choice for young women seeking care for breast lumps and other suspicious focal signs and symptoms. "It is time we used ultrasound to reduce unnecessary morbidity and costs associated with more aggressive invasive approaches," Dr. Lehman said.

Coauthors of the study addressing women under the age of 30 are Vilert Loving, M.D., Wendy B. DeMartini, M.D., Peter R. Eby, M.D., Robert L. Gutierrez, M.D., and Sue Peacock, M.Sc.

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Coauthors of the study addressing women age 30-39 are Michael Portillo, M.D., Wendy B. DeMartini, M.D., Peter R. Eby, M.D., Robert L. Gutierrez, M.D., and Franklin Liu, M.D.

Note: Copies of RSNA 2009 news releases and electronic images will be available online at [RSNA.org/press09](http://RSNA.org/press09) beginning Monday, Nov. 30.

RSNA is an association of more than 44,000 radiologists, radiation oncologists, medical physicists and related scientists committed to excellence in patient care through education and research. The Society is based in Oak Brook, Ill. ([RSNA.org](http://RSNA.org))

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