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NEWS

RSNA Press Release

Outpatient Procedure Shrinks Benign Breast Lumps

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At A Glance

- Cryotherapy offers safe and effective treatment of breast fibroadenomas without surgery.
- The outpatient procedure conserves breast tissue and does not compromise breast structure.
- On average, cryotherapy reduced the size of breast fibroadenomas by 73 percent.
- Cryotherapy is now being considered for treatment of breast cancer.

CHICAGO — Breast cryotherapy is a safe, effective and nearly painless office-based procedure that significantly reduces benign breast lumps without damaging breast structure, according to a study presented today at the 89th Scientific Assembly and Annual Meeting of the Radiological Society of North America (RSNA).

"Patients leave the office 30 minutes after the cryotherapy is completed," said lead author Peter J. Littrup, M.D., professor of radiology, urology and radiation oncology at Wayne State University and director of the image-guided therapy program at Karmanos Cancer Institute (KCI) in Detroit.

Cryotherapy for breast fibroadenomas, or fibrous benign lumps, is an ultrasound-guided procedure that uses exceptionally cold temperatures to freeze and kill abnormal tissue. Interventional radiologists numb the breast tissue around the mass and insert a cryoprobe, which is similar to a large needle, into the middle of the lesion. An ice ball forms at the tip of the probe and continues to grow until the ultrasound confirms that the entire lump has been engulfed, killing the tissue.

According to Dr. Littrup, there are three major advantages of cryotherapy for breast fibroadenomas. The first benefit is visualization. Ice is easily visualized with both ultrasound and CT, making the procedure safe and effective. Second, cryotherapy is virtually painless when the area around the tumor is numbed with a local anesthesic. The third benefit is the cosmetic outcome. "Cryotherapy preserves the breast's supporting architecture, or collagen, and does not leave significant surgical scars," Dr. Littrup said. Based on the promising results of this study, radiologists at KCI have begun using cryotherapy to treat many other organ sites, primarily using CT guidance.

The researchers treated 42 fibroadenomas in 27 patients with ultrasound-guided cryotherapy to evaluate outcomes and patient acceptance of cryotherapy for breast fibroadenomas originally planned for surgical removal. On average, the fibroadenomas were reduced in size

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by 73 percent. No significant complications were noted, and patients were pleased with the cosmetic results.

Affecting 10 percent of American women, most in their late teens and early 20s, fibroadenomas are often considered a leave-alone lesion. However, approximately 1 million are removed annually because of size, continued growth or for cosmetic reasons. African-American women have twice the incidence of fibroadenomas as Caucasian women.

The ability to conserve breast tissue is also highly desirable in the treatment of breast cancer, and Dr. Littrup has begun treating breast cancers under protocol.

Dr. Littrup's co-authors are Laurie Freeman-Gibb, M.S., R.N., Michael White, M.D., Kathy Carolin, M.D., Ted Harb, M.D., and Amit Vyas, M.D. (A grant was received from Sanarus, Inc.)

RSNA is an association of more than 35,000 radiologists, radiation oncologists and related scientists committed to promoting excellence in radiology through education and by fostering research, with the ultimate goal of improving patient care. The Society is based in Oak Brook, Ill.

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Ultrasound imaging of cryotherapy procedure for breast fibroadenoma. Figure 1

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Ultrasound imaging of cryotherapy procedure for breast fibroadenoma. Figure 2

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Cryotherapy for Breast Fibroadenomas

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