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High tech radiation for breast cancer

Date: Tuesday, November 27 @ 06:30:41 CET
Topic: Cancer

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CHICAGO, Nov. 26 (UPI) --

Beginning next year women with early stage breast cancer will have the option of high-tech radiation done in single dose or over a few days rather than weeks of treatment, researchers said Monday.

The new treatments use high dose radiation, but deliver the rays from the inside out, a process called brachytherapy. There are a handful of companies racing to get Food and Drug Administration approval for technology to provide the new procedure, said Dr. Frank Hussey Jr. of Lutheran General Hospital, Park Ridge, Ill.

One of the experimental devices is a balloon that is implanted inside the breast in the cavity left when the tumor is removed. When implanted, the balloon is deflated but after implantation, the balloon is filled with salt water--a technique that stretches the tissue that bordered the cancer. A radiologist then threads radioactive seeds along a wire into the inflated balloon. Those seeds bathe the tissue with high dose radiation. Dr. Martin Keisch of Mount Sinai Medical Center, Miami Beach, Fla., said five days of twice daily treatment delivered with this balloon device, which is called MammoSite, delivers as much radiation as six-weeks of standard X-ray treatment.

Mini-treatments that deliver mega-doses of radiation are a perfect match for lumpectomy, the breast-conserving surgery in which a tumor is removed but the breast is left in place, Keisch said at the Radiological Society of North America meeting. Holding up the device at a news conference, Keisch said it "is so simple that I can train a monkey to implant it." He predicted that simplicity would make the device a popular choice for radiologists treating breast cancer patients. Keisch presented official results from 28 women who were treated with MammoSite and said none had a recurrence of breast cancer. So far, he said, 43 women have undergone the treatment, which was "safe and well-tolerated in all women."

The MammoSite catheter can be implanted anytime up to eight weeks after lumpectomy, he said. Waiting longer is not recommended because the breast begins to heal and fill in the cavity left when the tumor is removed.

The only drawback of the device, he said, is women have a short tube protruding from the breast while the MammoSite is in place. "Some women said they had to change sleeping position to be comfortable," Keisch said. Once the device is removed, it leaves a scar "that's smaller than the tip of my pinkie," he said. Dr. Euan S. Thomson of Photoelectron Corp. of Lexington, Mass., developed another brachytherapy device. He said a single treatment with Intrabeam, a portable electron beam device "at time of

surgery, while the patient is still asleep on the table" is as effective as standard treatment. This device looks like a cone with a luminescent golf ball-sized knob on top. It is inserted into the breast after the tumor is removed. A long needle from the electron beam device fits into the cone and once it is "fired up, it delivers 50,000-Volt X-rays," Thomson told United Press International. The full X-ray dose is delivered over "about 20 to 30 minutes while the woman is still asleep on the table," he said.

Thomson said his device and the device used by Keisch "reflect the growing feeling among radiation oncologists that it may be sufficient to give a localized dose rather than standard therapy." In a study of 29 women who had lumpectomies, 15 women were treated with Intrabeam and 14 with standard six-week radiation treatment. After 18 months "no women in either group had a recurrence," Thomson said.

Hussey, a spokesperson for the radiology group, told UPI the new treatment approach is "a good idea but it needs to be studied in much larger groups of patients before we know if it is as good as standard radiation treatment." Keisch said Proxima Therapeutics Inc. of Alpharetta, Ga., maker of MammoSite, expects the FDA approval "early in 2001." Thomson said his device, Intrabeam, already is FDA approved and is being used at the Cleveland Clinic Foundation and New York Medical College as "a booster treatment at time of surgery." But those centers continue to use standard radiation therapy in addition to Intrabeam treatment. The manufacturers, Proxima and Photoelectron, funded the studies.