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## **Stem cells from fat used to fix breasts after cancer operation**

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SAN ANTONIO – For the first time, doctors have used stem cells from liposuctioned fat to fix breast defects in women who have had cancerous lumps removed.

The approach is still experimental, but it holds promise for millions of women left with cratered areas and breasts that look very different from each other after cancer surgery. It also might be a way to augment healthy breasts without using artificial implants.

So far, it has been tested on only about two dozen women in a study in Japan. But doctors in the United States say it has great potential. “This is a pretty exciting topic right now in plastic surgery,” said Dr. Karol Gutowski of the University of Wisconsin-Madison. “There are people all over the country working on this.

The Japanese study was reported Saturday at the San Antonio Breast Cancer Symposium. The company that developed the treatment, Cytore Therapeutics of San Diego, plans larger studies in Europe and Japan next year.

More than 100,000 women have lumps removed each year in the United States. These operations, lumpectomies, often are done instead of mastectomies, which take the whole breast. But they often leave deformities because as much as a third of a woman’s breast may be removed.

“It’s almost a euphemism” to call it a lumpectomy, said Dr. Sydney Coleman, a plastic surgeon at New York University who has consulted for Cytore and is interested in the stem-cell approach.

The defect “initially may not be as noticeable” but it often gets worse, especially if the woman also has radiation treatment, said Dr. Sameer Patel, a reconstructive surgeon at Fox Chase Cancer Center in Philadelphia.

“There’s a growing push to try to involve the plastic surgeon particularly for this reason – to try to avoid a defect,” but once one develops, options to repair it are limited, Patel said.

The implants sold today are for reconstructing breasts after mastectomies. They aren’t designed to fix odd shaped deformities from lumpectomies or radiation.

“Each one is so different,” Gutowski explained. “There’s no little thing you can just pop in there.”