Implant-Based Breast Reconstruction Following Radiation Has High Patient Satisfaction Rate Despite Complications

Autologous Tissue-Based Reconstruction Has Lower Incidence of Major Corrective Surgery, Reports Plastic and Reconstructive Surgery

ARLINGTON HEIGHTS, Ill. (October 1, 2012) – Breast cancer patients who have received radiation therapy after mastectomy have more problems related to the use of implants for breast reconstruction, according to a review in the October issue of *Plastic and Reconstructive Surgery®*, the official medical journal of the American Society of Plastic Surgeons (ASPS).

Although women should be aware of these increased risks, implant-based breast reconstruction after radiation therapy is still successful in most cases, according to the paper by ASPS Member Surgeon Dr. Steven J. Kronowitz of The University of Texas MD Anderson Cancer Center, Houston.

Breast Implants after Radiation Carry Increased Risks
Dr. Kronowitz reviews and synthesizes recent research on breast reconstruction using implants for patients receiving radiation therapy. To reduce the risk of recurrent breast cancer, increasing numbers of women are being treated with radiation therapy after mastectomy (postmastectomy radiation therapy, or PMRT). Radiation has toxic effects on tissues that can cause problems with healing.

Reconstructive surgeons agree that breast reconstruction results after radiation therapy tend to be better when the patient's own (autologous) tissue is used. However, in some situations implants may be the preferred option for reconstruction, or the only choice. The goal of the review was to analyze the best available evidence on the use of breast implants after radiation therapy.

Dr. Kronowitz identified 19 studies, of varying quality, evaluating the results of implant-based reconstruction in patients receiving PMRT. He writes, "In general, radiation increases the risk of complications and poor aesthetic outcomes of implant-based reconstruction."

In one of the largest studies performed to date, the risk of major complications was about 45 percent for women receiving implants with radiation therapy, compared to 24 percent in patients not exposed to radiation. Complications were more common when radiation was given before versus after implant-based reconstruction: 64 versus 58 percent.

The highest-quality study found that, among women undergoing implant reconstruction, patient satisfaction scores were lower for those receiving radiation therapy. Another study reported that women receiving implants after radiation therapy were more likely to need major corrective surgery.

Newer Techniques May Lead to Improved Results
One paper suggested that radiation-related skin damage predicted higher complication rates and poorer aesthetic outcomes after implant-based reconstruction. Some recent research indicated that the results of implant reconstruction after PMRT could be improved by the addition of autologous fat transfer—using the patient's own fat tissue to enhance the results.

"Despite advances in reconstructive devices and materials, PMRT still appears to have an adverse impact on outcomes of implant-based breast reconstruction," Dr. Kronowitz writes. "However," he adds," the majority of patients who undergo implant-based reconstruction and PMRT ultimately keep the implant-based reconstruction." Outcomes appear better with two-stage reconstruction, where the implant is placed after PMRT, rather than immediately after mastectomy.

Autologous fat grafting and other new approaches hold promise for improving the results of implant-based reconstruction after radiation therapy for breast cancer, Dr. Kronowitz believes. "In the meantime, patients who will receive or have received radiation should be advised of the risks of implant-based breast reconstruction." In an upcoming article, Dr. Kronowitz will review recent data on the results of autologous tissue-based breast reconstruction after radiation therapy.

Plastic and Reconstructive Surgery® is published by Lippincott Williams & Wilkins, part of Wolters Kluwer Health.

LaSandra Cooper or Marie Grimaldi
American Society of Plastic Surgeons
847-228-9900
media@plasticsurgery.org
www.plasticsurgery.org

About *Plastic and Reconstructive Surgery*
For more than 60 years, *Plastic and Reconstructive Surgery®* (http://journals.lww.com/plasreconsurg/) has been the one consistently excellent reference for every specialist who uses plastic surgery techniques or works in conjunction with a plastic surgeon. The official journal of the American Society of Plastic Surgeons, *Plastic and Reconstructive Surgery®* brings subscribers up-to-the-minute reports on the latest techniques and follow-up for all areas of plastic and reconstructive surgery, including breast reconstruction, experimental studies, maxillofacial reconstruction, hand and microsurgery, burn repair, and cosmetic surgery, as well as news on medico-legal issues.

About ASPS

The American Society of Plastic Surgeons (ASPS) is the world's largest organization of board-certified plastic surgeons. Representing more than 7,000 Member Surgeons, the Society is recognized as a leading authority and information source on aesthetic and reconstructive plastic surgery. ASPS comprises more than 94 percent of all board-certified plastic surgeons in the United States. Founded in 1931, the Society represents physicians certified by The American Board of Plastic Surgery or The Royal College of Physicians and Surgeons of Canada. ASPS advances quality care to plastic surgery patients by encouraging high standards of training, ethics, physician practice and research in plastic surgery. You can learn more and visit the American Society of Plastic Surgeons at PlasticSurgery.org or Facebook.com/PlasticSurgeryASPS and Twitter.com/ASPS_news.