Breast cancers detected at smaller size in women with implants

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Breast augmentation with implants does not interfere with the ability to detect later breast cancers—in fact, cancers may be detected at a smaller size in breasts with implants, according to a study in the April issue of *Plastic and Reconstructive Surgery*, the official medical journal of the American Society of Plastic Surgeons (ASPS).

But mammography may be less likely to detect cancers in breasts with implants, according to the research by Michael Sosin, MD, of MedStar Georgetown University Hospital, Washington, DC, and colleagues. The study also shows some differences in breast cancer diagnosis and treatment in women who have had breast augmentation, including a higher rate of mastectomy.

Palpable Cancers Detected at Smaller Size in Breasts with Implants

The researchers studied 48 patients with breast cancer developing after breast augmentation, along with a group of 302 women with breast cancer who did not have breast implants. Average time from breast augmentation to cancer diagnosis was 14 years. Data on the two groups of patients were analyzed to determine whether and how breast augmentation and the presence of implants affected the detection, staging, and treatment of breast cancer.

At diagnosis, the cancers were significantly smaller in women with

breast implants: average size 1.4 centimeter, compared to 1.9 centimeter in women without implants. In patients whose cancers were detected by the finding of a palpable mass—by either breast self-exam or clinical exam—the average tumor size was 1.6 cm in the breast augmentation group versus 2.33 cm in the comparison group.

However, the rate of cancer detection by screening mammograms was lower for women with implants: 77.8 percent, compared to 90.7 percent in breasts without implants. Cancers tended to be diagnosed at an earlier stage in the breast augmentation group, although the difference was not statistically significant.

The study also found some differences in subsequent breast cancer diagnosis and treatment. Women with implants were more likely to undergo excisional biopsy and less likely to undergo imaging-guided core needle biopsy. Women in the breast augmentation group were more likely to be treated with mastectomy, 73 versus 57 percent; and less likely to undergo breast-conserving treatment, 27 versus 43 percent.

Breast cancer detection was unaffected by the type of breast implant (silicone- versus saline-filled), or whether the implant was placed over or under the pectoral muscle. There was some evidence to suggest that mammographic detection was more likely in breasts with saline-filled versus silicone-filled implants.

It's estimated that 1 in 8 women will develop breast cancer during their lives, while almost 300,000 women undergo breast augmentation each year. Studies have clearly shown that breast implants do not increase the risk of breast cancer. But there are continued concerns that implants might lead to delayed diagnosis of breast cancer.

The new findings suggest that breast cancers are likely to be detected at smaller sizes in women who have undergone breast

augmentation—especially for palpable masses detected by self-exam or clinical examination.

In contrast, screening mammography may be more likely to miss cancers in women with implants, despite the use of modern mammographic techniques designed to increase detection.

While women with implants may be more likely to undergo mastectomy, the authors note that breast-conserving treatment remains an option for such patients. Dr. Sosin comments, "Our findings may have important implications for patient counseling regarding breast augmentation and breast cancer detection."

More information: "Breast Cancer following Augmentation Mammaplasty: A Case-Control Study." DOI: 10.1097/PRS.0000000000004196

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