

A Surgical Oncologist's Take on Breast Implants

Editor's Note: In 2012, 330,631 breast augmentations were performed in the United States, a 227% increase since 1997. Of those performed, 28% used saline implants and 72% used silicone.^[1] A major Canadian study^[2] recently reported a hazard ratio of 1.38 for breast cancer-specific mortality in women with cosmetic implants vs women with no implants. However, the absolute risk was only approximately a 4% reduction in 5-year breast cancer-specific survival.

To get perspective on this issue from a surgical oncologist, Medscape talked to Michelle Specht, MD, Assistant Professor, Department of Surgery, Harvard Medical School and Associate Visiting Surgeon, Division of Surgical Oncology, Massachusetts General Hospital, Boston.

Medscape: Is this study of concern to you? And should women with breast cancer and cosmetic implants be managed differently from women without such implants?

Dr. Specht: This is a very interesting study and definitely important for women considering cosmetic implants. What is important to understand from it is that patients who had cosmetic implants were compared with women without them and were evaluated for size, stage, and then survival after diagnosis of breast cancer.

Medscape: Epidemiologic studies have shown no increased risk for breast cancer in women with breast implants compared with those without them. In fact, according to an interview with the lead investigator on the Canadian trial, most showed a slight reduction in the incidence of breast cancer among women with breast implants compared vs women without implants. Would you have any thoughts on why there might be a lower risk?

Dr. Specht: This makes sense. We do not think that implants *increase* the risk for breast cancer -- rather, that they cause difficulties in the early diagnosis of it. Patients with cosmetic implants may have a slightly reduced incidence of breast cancer owing to the fact that women with a higher risk for breast cancer, such as those with a strong family history of breast cancer, may opt *not* to undergo augmentation because of the limitations in mammographic screening of women with implants. Similarly, patients without a family history of breast cancer may feel more comfortable undergoing augmentation, and therefore this group may appear to have a slightly lower risk for breast cancer owing to this self-selection.

Medscape: There are challenges in developing studies on the risk for breast cancer in women with implants. Although breast cancer is perceived to be frequent, cohorts of women with implants that have been followed long enough to accrue a sufficient number of new breast cancer cases are relatively rare. Despite the strong evidence against an initial risk for breast cancer in these women, do you have any concern that there might be a higher risk with certain types of implants, which may not have shown up in these studies?

Dr. Specht: I think this is a hard area to speculate about. Again, as you pointed out, studies are limited, difficult to interpret, and biased. Groups of women with different types of implants are not large enough to prove a difference.

Medscape: The study also found that women with implants and breast cancer received a diagnosis at later stages than women with breast cancer following no-implant surgery, and there was a very slight increase in stage at diagnosis in these women. This finding, of course, could explain the lower survival rates. How should these women be initially screened?

Dr. Specht: I really believe that this is the most important finding of this study. Previous studies have demonstrated the lower sensitivity of mammography in the setting of cosmetic implants. This is predominantly due to the inability to get all the breast tissue imaged in the setting of cosmetic implants. This study expands upon those data by demonstrating that women with cosmetic implants are diagnosed with more advanced breast cancer.

Medscape: Are there radiographic techniques that could improve visualization?

Dr. Specht: Techniques have been developed, including standardized implant displacement views, to help overcome this limitation. Implant displacement views, or Eklund views, allow improve visualization of breast tissue in women with cosmetic implants. It is a complex technique that involves additional images. Therefore, patients with implants should inform their breast imaging center that they have cosmetic implants. This technique involves pushing the implant to the chest wall and then pulling the breast tissue forward.

However, even with these additional images, challenges still arise with detecting breast cancers in women with cosmetic implants, primarily because of the inability to get all the tissue on the image.

Medscape: Is there any evidence for using other imaging techniques, such as MRI?

Dr. Specht: MRI is a possible adjunct to mammography for women with breast augmentation, owing to its ability to image in 3-D and to image all the tissue. Unfortunately, there are risks associated with breast MRI, predominantly an increased risk in biopsies that yield benign tissue -- a higher false-positive rate. Biopsies in women with breast augmentation are often able to be performed in a percutaneous fashion. However, sometimes a surgical biopsy is necessary because of the risk for rupture of the implant associated with a percutaneous biopsy.

Medscape: Are the imaging challenges similar in women who have had breast reconstructive surgery after mastectomy?

Dr. Specht: Challenges associated with imaging are not a concern after mastectomy because mammography is not indicated after mastectomy with implant reconstruction. In theory, after mastectomy there is no tissue to image. Recurrences are detected via chest-wall examination, on which they would appear as palpable lesions.

Medscape: Would you approach initial management of breast cancer patients who have implants any differently from women with breast cancer and no implants?

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Dr. Specht: When a woman with cosmetic implants presents with newly diagnosed breast cancer, the treatment is the same. As a surgeon, I assess resectability on the basis of the size of the cancer in relationship to the volume of the breast tissue. Larger tumors may require mastectomy in order to completely resect the lesion. However, lumpectomy is possible for many smaller tumors. We do caution patients that breast radiation, which in general accompanies lumpectomy, may cause an increased risk for capsular formation around the implant.

Medscape: Do you have any other thoughts on this issue?

Dr. Specht: This is an important study, which demonstrated that women with cosmetic implants present with later-stage breast cancer compared with women without breast augmentation. However, this study has limitations, and therefore the results should be interpreted with caution.

This meta-analysis looked at a small number of studies, some of which were limited by not adjusting for age at diagnosis, period of diagnosis, or body mass index. One study reported overall mortality and not disease-specific mortality. Therefore, the authors suggest that differences in disease-specific mortality could not be concluded from this work, but rather future studies should be performed to continue to address this questions.

Findings regarding later stage at presentation are relevant and support what is known about limitations of mammography in the setting of breast implants. Women considering breast augmentation should be aware of this study and cautioned about the limitations of screening and its implications in detecting early-stage breast cancer.

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