Do cosmetic breast implants hinder the detection of malignancy and reduce breast cancer–specific survival?

Yes. According to this systematic review and two meta-analyses of observational studies, cosmetic breast augmentation adversely affects survival of women who are subsequently given a diagnosis of breast cancer. Cosmetic breast implants also hamper detection of breast malignancy.

In the first meta-analysis of 12 studies, the overall odds ratio (OR) for a nonlocalized stage of breast cancer at diagnosis among women with cosmetic breast implants was 1.26 (95% confidence interval [CI], 0.99–1.60; $P = .058$).

In the second meta-analysis of five studies, the overall hazard ratio for breast cancer–specific mortality among women with cosmetic breast implants was 1.38 (95% CI, 1.08–1.75).

Lavigne E, Holowaty EJ, Pan SY, et al. Breast cancer detection and survival among women with cosmetic breast implants: systematic review and meta-analysis of observational studies. BMJ. 2013;346:f2399.

EXPERT COMMENTARY

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Most epidemiologic studies have found no elevated risk of breast cancer among women who undergo cosmetic breast augmentation. However, there is concern that implants, which are radio-opaque, may limit our ability to diagnose malignancies at an early stage using screening mammography.

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In this study, investigators compared the stage distribution of breast cancers at diagnosis and documented breast cancer–specific

WHAT THIS EVIDENCE MEANS FOR PRACTICE

These findings underscore the importance of sharing the risks of nonlocalized breast malignancy and increased breast cancer mortality with patients who are considering cosmetic breast implants, as well as with women who have already undergone this common procedure. Future studies are needed to address relevant issues, including the role of 3-D (tomosynthesis) technology in screening women with breast implants and optimal screening intervals in this subgroup.

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FAST TRACK

The overall odds ratio for a nonlocalized stage of breast cancer at diagnosis was 1.26 among women with cosmetic breast implants, compared with women without implants

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survival among women with and without cosmetic breast implants. Twelve cross-sectional studies published after 2000 in the United States had evaluated stage distribution of breast cancer among women with and without cosmetic implants. As stated above, investigators found an elevated risk of nonlocalized breast cancer among women with implants in their meta-analysis of these studies (OR, 1.26), but this elevated risk did not achieve statistical significance. A second analysis of five studies found an elevated risk of breast cancer–specific mortality (OR, 1.38), compared with the general population (no implants), which did achieve significance.

MRI may be helpful—but is the expense justified?

More than 300,000 women underwent cosmetic breast augmentation in 2011 in the United States, an increase of roughly 800% since the early 1990s. The impaired visualization of breast tissue via mammography in these women ranges from 22% to 83%. In addition, the implants limit compression of the breasts during mammography, and capsular contraction further contributes to this problem.

Magnetic resonance imaging (MRI) may be helpful in screening women with cosmetic breast implants, but this technology is expensive, and evidence supporting its routine use in this population is limited.

Some mammographers use special techniques to better visualize the breast tissue of women with implants. These techniques include displacing the implant posteriorly and pulling the breast tissue in front of it. However, even with such strategies, as much as one-third of the breast tissue may be inadequately assessed.