



Editorial on Oncoplastic Breast-Conserving Surgery for Synchronous Multicentric and Multifocal Tumors: Is It Oncologically Safe? A Retrospective Matched-Cohort Analysis

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Multicentric and multifocal breast tumors are notoriously difficult to treat surgically, especially in the setting of breast conservation. Traditionally, such breast cancer presentations meant that patients would undergo mastectomy. Oncoplastic surgery is a form of breast conservation involving partial mastectomy followed by volume displacement, or volume displacement and a contralateral symmetry operation as appropriate.^{1–3} The ability to remove large areas of the breast followed by immediate reconstruction allows the option for breast conservation even in the setting of multicentric or multifocal breast cancer presentations.

De Lorenzi et al.⁴ performed a retrospective matched cohort analysis comparing oncologic outcomes between oncoplastic surgery and mastectomy patients who have either multicentric or multifocal breast tumors. They compared 100 patients who consecutively underwent oncoplastic surgery and evenly matched them to 100 patients undergoing mastectomy. Both groups were well balanced in terms of tumor size, histology, nodal status, grade, and subtype (hormone positive, HER2 positive, triple negative). As expected, all the oncoplastic surgery patients underwent standard fractionation or hypofractionation radiotherapy in the adjuvant session, and 50% of the mastectomy patients underwent adjuvant radiotherapy. The oncoplastic surgery group largely (66%) underwent a level 1 volume displacement oncoplastic operation (mostly

glandular displacement), with the remaining undergoing a level 2 volume displacement technique (with a specified pedicle and skin incision type). Of the mastectomy group, 92% underwent tissue expander or implant immediate reconstruction. Even with an aggressive tumor burden in the breast, the results at 10 years demonstrated that there was no statistically significant difference in local recurrence, regional recurrence, distant recurrence, disease-free survival, or overall survival between the oncoplastic surgery group and the mastectomy group. As expected, there was a trend for higher local recurrence in the oncoplastic surgery arm, given that, by definition, this was breast conservation surgery and not a mastectomy. With regards to regional recurrence, there was a trend for a higher rate in the mastectomy arm, which is possibly because only 50% of the mastectomy patients received radiation therapy compared with 100% of the oncoplastic surgery patients. As such, this study, albeit retrospective, provides a strong case supporting the safety of oncoplastic surgery compared with mastectomy in the surgical treatment of multifocal and multicentric breast cancer.

The implications of this study⁴ are quite significant. As with past studies noting the success of oncoplastic surgery in pushing the boundaries of breast conservation in larger cancers,^{5,6} the paper by De Lorenzi et al.⁴ suggests that, even in situations with multiple cancers, oncoplastic surgery may provide a breast conservation option for the patient. The results of this study supporting the safety of oncoplastic surgery add additional complexity to the treatment options in multifocal or multicentric breast surgery. In deciding which patients with either multifocal or multicentric breast cancer are candidates for oncoplastic surgery, factors such as overall breast size compared with tumor burden are critical (as noted in the patient selection section of the paper). Also, especially in the setting of

multicentric breast cancer, with each cancer separated by at least 5 cm of noncancerous tissue, many oncoplastic surgical options may be negated based on how the cancer distribution burden limits the type of pedicle that one can use. This is especially true if the cancer burden were to be present in both the inferior and medial pedicle distributions in the breast, which would remove the two most common types of pedicles used in level 2 volume displacement oncoplastic surgery (inferior and superomedial). Additionally, the patient should be informed about the possibility of needing a contralateral symmetry operation, which ideally should be done at the time of the index cancer operation. As part of the shared decision model and informed surgical consent, the mastectomy option should be discussed in detail, with appropriate reconstruction counseling per patient preferences. The patient should be informed that, with a mastectomy operation and reconstruction, it is likely that several stages⁷ or corrective operations may be needed in addition to the possible short- and long-term complications of the preferred reconstructive modality (implant versus autologous tissue). Therefore, while De Lorenzi's paper⁴ provides critical oncologic outcome information that needs to be discussed as part of the shared decision-making discussion between the surgical team and the patient with regards to local/regional recurrence and survival, each operative choice has its vast array of possible postsurgical outcomes that weigh into the eventual choice taken by the patient. Recent studies have demonstrated that oncoplastic surgery in general has higher patient-reported outcomes compared with mastectomy operations.⁸ Nevertheless, like doctors, patients are unique individuals and surgical plans need to be formulated with empathy, support, and evidence-based discussion, with focus on patient-specific preferences (size preference of breast, etc.). Furthermore, the relative fiscal impact of each choice with specific regards to financial toxicity to the patient has yet to be studied in detail, but is definitely a significant real-world issue that impacts decision-making.⁹ In sum, De Lorenzi et al.⁴ provide an

excellent study noting the comparable oncologic safety of oncoplastic surgery to mastectomy in multifocal and multicentric breast cancer.

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