

COMMENTARY

Extreme oncoplasty: The last opportunity for breast conservation—Analysis of its impact on survival and quality of life

Benigno Acea Nebril MD, PhD | Alejandra García Novoa MD, PhD  |
 Natalia Polidorio MD | Carmen Cereijo Garea MD | Alberto Bouzón Alejandro MD |
 Joaquín Mosquera Oses MD

Breast Unit, Complejo Hospitalario Universitario A Coruña, A Coruña, Spain

Correspondence

Alejandra García Novoa, Atocha Baja 3, 6°B A Coruña 15001, Spain.
 Email: mag_1406@hotmail.com

Oncoplastic techniques in the management of breast cancer have improved the quality of cosmetic results, especially in areas at high risk of deformity. The term “extreme” oncoplastic surgery (eOBCS)

was defined by Silverstein^{1,2} as a breast-conserving procedure which, through the use of oncoplastic techniques, is offered to a patient who would normally require a mastectomy according to the majority of

TABLE 1 Results of clinical characteristics and pathological assessment

| | Total (N = 204) | eOBCS (N = 33) | neOBCS (N = 171) | P |
|--------------------------------------|-----------------|----------------|------------------|--------|
| Age (years) | 52.3 | 51.0 | 52.5 | NS |
| BMI (kg/m ²) | 26.8 | 27.9 | 26.5 | NS |
| Surgery duration (min) | 149.9 | 156.1 | 148.8 | NS |
| Hospital stay (days) | 1.7 | 1.74 | 1.79 | NS |
| Readmission | 3 (1.47%) | 0 (0%) | 3 (1.7%) | – |
| Reoperation | 5 (2.4%) | 1 (3.03%) | 5 (2.3%) | NS |
| Mean weight of surgical specimen (g) | 221.38 | 332.67 | 200.77 | 0.046 |
| Mean tumor size (cm) | 1.78 | 3.01 | 1.55 | <0.001 |
| <i>Tumor stage at intervention</i> | | | | |
| 0 | 25 (12.26%) | 5 (15.15%) | 20 (11.70%) | 0.020 |
| I | 66 (32.35%) | 7 (21.21%) | 59 (34.50%) | |
| Ila | 59 (28.92%) | 7 (21.21%) | 52 (30.41%) | |
| Ilb | 18 (8.82%) | 3 (9.09%) | 15 (8.77%) | |
| III | 20 (9.80%) | 7 (21.21%) | 13 (7.60%) | |
| <i>BreastQ results</i> | | | | |
| Satisfaction with the breast | 82.9 | 82.5 | 76.3 | <0.06 |
| Satisfaction with the outcome | 74.8 | 88.0 | 82.1 | <0.02 |
| Satisfaction with the nipple complex | 78.4 | 96.2 | 75.7 | 0.001 |
| Psychological well-being | 83.2 | 91.0 | 82.1 | <0.02 |
| Physical well-being | 71.0 | 78.7 | 67.2 | NS |
| Sexual well-being | 70.2 | 76.2 | 70.0 | NS |
| Satisfaction with information | 81.8 | 88.9 | 80.8 | NS |
| Satisfaction with surgeon | 97.1 | 98.8 | 96.9 | NS |
| Satisfaction with medical staff | 98.0 | 98.0 | 98.0 | NS |

Note. NS, not significant; eOBCS, extreme oncoplasty breast conserving surgery; neOBCS, non-extreme oncoplasty breast conserving surgery.

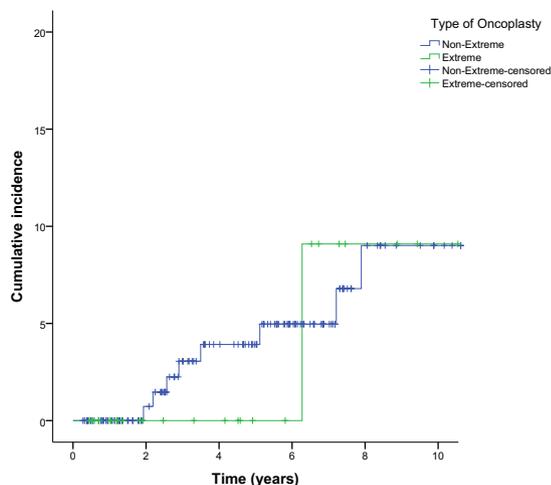


FIGURE 1 Actuarial incidence of local relapse at 10 years [Color figure can be viewed at wileyonlinelibrary.com]

surgeons. However, there is a lack of information about the safety of these procedures as most studies only present isolated cases of extreme breast conservation.

We made a retrospective study between April 2003 and July 2017 in women with breast carcinoma who had undergone reduction oncoplastic surgery. The aim was to evaluate the effect of eOBCS on patient welfare, survival, and quality of life compared to non-extreme oncoplastic (neOBCS) procedures. eOBCS was defined by Silverstein criteria.² All patients received the BREAST-Q questionnaire between 12 and 24 months after the end of the radiotherapy treatment.

A total of 1198 patients underwent surgery during the study period, of which 204 met the inclusion criteria. The case group was made up of 33 eOBCS patients. eOBCS was indicated in patients with larger tumors and those with greater tumor dispersion. The mean weight of the surgical specimen was significantly greater in the eOBCS, as was the mean tumor size, with a greater presence of T3 tumors (Table 1). The incidence of bleeding and tissue/nipple-areolar complex necrosis during the postoperative period was low in both groups. Re-excision of margins was necessary in 12.5% of eOBCS patients and in 8.1% of neOBCS patients, with a low incidence of mastectomy (3.1% in eOBCS and 1.1% in neOBCS).

The mean patient follow-up was 66.6 ± 45.5 months. During this time, 21 locoregional recurrences were diagnosed, suggesting a 10-year actuarial incidence of 9.0% and 9.1% for the eOBCS and neOBCS groups, respectively (Figure 1). Actuarial survival at 10 years was 88%.

Women who underwent eOBCS reported significantly greater satisfaction with the breast, evolution, their psychosocial well-being, and the condition of the nipple (Table 1). In addition, they achieved a nominally higher score for sexual and physical well-being, as well as satisfaction with the informative process.

Oncoplastic surgery has proven to be a good alternative to lumpectomy for the conservative management of breast cancer, facilitating oncological resection and improving quality of life. Only

three studies have analyzed survival and the incidence of local relapse after oncoplastic surgery. Clough et al³ analyzed the safety of oncoplastic procedures and found the incidence of local relapse at 5 years to be 2.2%. Describing the experience of the Milan European Institute of Oncology, Lorenzi et al⁴ reported the incidence of local relapse to be 6.7% at 10 years. Finally, Acea et al⁵ found a local relapse incidence of 4.7% and 9.8% at 5 and 10 years, respectively. In these three studies, no difference in overall survival was observed between lumpectomy and oncoplastic procedures. Conversely, the oncological safety of eOBCS has not been analyzed previously, since most studies are clinical cases or series without actuarial analysis of overall- or disease-free survival. The series published by Silverstein² showed a local relapse incidence of 1.5% at a mean follow-up of 24 months, but did not provide actuarial data at 5 and 10 years. Our study demonstrates an oncologic control similar to that of neOBCS over a mean follow-up of 65.6 months. In our opinion, oncoplastic breast reduction is the ideal oncoplastic approach to breast resection under extreme conditions, as it allows a wide resection of the affected area, facilitates remodeling of the remaining tissue to construct a new breast, and permits breast conservation in almost all patients. In our study, analysis of patient satisfaction and quality of life showed that the eOBCS group reported higher values for all items compared to the neOBCS group. In our opinion, patients who have undergone eOBCS are more satisfied as they have understood the potential reality of mastectomy during the informative process and therefore particularly value the result of their breast conservation.

In conclusion, eOBCS for oncoplastic breast reduction allows a high rate of breast conservation, with 10-year overall survival and local relapse rates that are similar to those seen with neOBCS. Patients who undergo eOBCS have a significantly greater satisfaction and quality of life than those who undergo neOBCS.

ORCID

Alejandra García Nova  <https://orcid.org/0000-0002-7141-7570>

REFERENCES

1. Silverstein MJ. Radical mastectomy to radical conservation (extreme oncoplasty): a revolutionary change. *J Am Coll Surg*. 2016;222(1):1-9.
2. Silverstein MJ, Savalia N, Khan S, Ryan J. Extreme oncoplasty: breast conservation for patients who need mastectomy. *Breast J*. 2015;21(1):52-59.
3. Clough KB, van la Parra RFD, Thygesen HH, Levy E, Russ E, Halabi NM. Long-term results after oncoplastic surgery for breast cancer: a 10-year follow-up. *Ann Surg*. 2017;268:165-171. <https://doi.org/10.1097/sla.0000000000002255>.
4. De Lorenzi F, Hubner G, Rotmensz N, et al. Oncological results of oncoplastic breast-conserving surgery: long term follow-up of a large series at a single institution: a matched-cohort analysis. *Eur J Surg Oncol*. 2016;42(1):71-77.
5. Acea-Nebril B, Cereijo-Garea C, García-Nova A, Varela-Lamas C, Builes-Ramírez S, Bouzón-Alejandro A. The role of oncoplastic breast reduction in the conservative management of breast cancer: complications, survival, and quality of life. *J Surg Oncol*. 2017;115(6):679-686.