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Extreme oncoplasty: Past, present, and future

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Objective: Recently, a new paradigm has been considered for mastectomy candidates with large multifocal and multicentric tumors, designated extreme oncoplasty (EO), which has evolved into new techniques for breast-conserving surgery (BCS) to be performed in tumors with limited conditions for BCS. At present, there are few publications, and there is no uniform description grouping all technical possibilities and new indications. The objective was to perform a systematic review about EO. **Methodology:** Based on resolution 466 from 12/12/12, it is not necessary to be evaluated by the Ethics Committee. A systematic review was conducted to evaluate the indications and surgeries performed in the context of EO. We used PICO for article evaluation: Problem = breast neoplasm; Intervention = OS, EO, or reconstructive surgical procedures; Comparison = all; and Outcome = indication and type of surgery. A literature review was performed by screening two databases (PubMed and LILACS). To evaluate articles in PubMed, we used the terms: (((“breast neoplasms”[Mesh]) AND (“surgery, plastic”[Mesh] OR “plastic surgery procedures”[Mesh] OR “mammoplasty”[Mesh] OR “mastectomy, segmental”[Mesh])) AND (“oncoplastic surgery” OR “oncoplasty” OR “oncoplastic” OR “extreme oncoplasty” OR “extreme oncoplastic” OR “regional flaps” OR “geometric compensation”)). The terms used in LILACS were “neoplasias da mama” and “procedimentos cirúrgicos reconstrutivos”; “neoplasias da mama” and “cirurgia oncoplastica ou oncoplastia.” **Results:** Initially, 787 articles were identified from the PubMed database. The titles and abstracts were evaluated, and 140 articles were selected for reading. After content evaluation (November 30, 2022), 39 articles were selected for this study. Specifically, for EO, 23 original articles and 4 comments were evaluated. Silvertstein suggested the term EO and the articles selected here. Paulinelli considered the term GC using wise pattern resection, and similar articles were selected. We found articles related to preoperative care, traditional indications, increased indications, and casuistic and case reports. Quality of life was evaluated. In addition, four replies were published. We found two articles on LILACS, one of which was included. Classical indications were tumors larger than 5 cm and multifocal and multicentric tumors, which the initial surgery to be considered was mastectomy. New indications were (1) breast tumor unfavorable ratio; (2) extensive microcalcifications or extensive CDIS; (3) new or recurrence in irradiated breasts; (4) locally advanced breast carcinoma with partial response to chemotherapy; (5) inappropriate scare; and (6) medium and low breast with ptosis. New situations are small- to moderate-sized non-ptotic with centrally located breast cancer, small- to moderate-sized breast and flaps. We observed new options, including general discussions, partial breast amputation, regional flaps, and other techniques. **Conclusion:** EO represents a new paradigm related to BCS. It is important to discuss the technical possibilities, improving the number of patients to be selected for these surgeries.

Keywords: breast neoplasms; breast-conserving surgery.