

# Training Canadian surgeons in oncoplastic breast surgery: Where do we stand?

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## SUMMARY

Breast-conserving surgery with adjuvant radiation therapy is widely accepted as a universal standard of care for women with early-stage breast cancer. Oncoplastic breast-conserving surgery (OPS) techniques have emerged in recent years, facilitating the achievement of better cosmetic results while adhering to good oncological principles. Compared with the rest of the international community, Canada has been fairly slow in its clinical uptake of OPS. This commentary discusses how Canada can increase its capacity for OPS.

**B**reast-conserving surgery with adjuvant radiation therapy is widely accepted as a universal standard of care for women with early-stage breast cancer. Prospective, randomized clinical trials with more than 20 years of follow-up data have reported no difference in mortality and overall survival in women who received breast-conserving surgery compared with women treated with mastectomy.<sup>1</sup> The success of breast conservation depends on 2 goals: the surgery must successfully excise the entire cancer, and the cosmetic result needs to be such that the patient retains a cosmetically pleasing breast contour without deformity. Historically, breast conservation has not always achieved a good cosmetic result, leaving 30% of patients with a visible cosmetic deformity<sup>2</sup> and resulting in negative patient-reported outcomes (body image and quality of life) and postradiation deformities that are severe and difficult to manage by the plastic surgeon.<sup>2</sup>

Oncoplastic breast-conserving surgery (OPS) techniques have emerged in recent years, facilitating the achievement of better cosmetic results while adhering to good oncological principles. The term “oncoplastic” first appeared in 1996,<sup>3</sup> when Audretsch described the technique of reconstructing a partial mastectomy defect as a further refinement of breast conservation based on a basic principal of breast surgery: that it is much easier to prevent a cosmetic deformity than to repair it later. Since its introduction, OPS has enabled surgeons to remove greater volumes of tissue successfully, thus reducing mastectomy and re-excision rates. For the first time, patients with large-volume and multicentric disease are able to undergo breast conservation with superior cosmesis and long-term oncological safety.<sup>4</sup>

## FORMAL CANADIAN ONCOPLASTIC TRAINING FELLOWSHIPS

Oncoplastic surgical techniques can be divided into 3 levels according to the extent of skill and training required to perform each of these procedures (Table 1), although the amount of training needed for competency has not yet been standardized. With more and more patients requesting and expecting an optimal postoperative appearance, it should be clear to

Table 1. Classification of oncoplastic breast procedures\*

Category	Examples
Level I	Dual plane undermining, nipple undermining, glandular advancement and lumpectomy defect closure
Level II	Glandular rotations, skin excision, de-epithelialization and nipple areolar complex recentralization, round block (Binelli) mastopexy, crescent mastopexy, raquet mastopexy, hemibatwing and batwing
Level III	Reduction mammoplasty procedures with contralateral balancing procedures—wise pattern reduction, vertical mammoplasty, V/J mammoplasty

\*Levels I and II can be learned and performed independently by many surgeons; level III techniques involve the contralateral normal breast and are often jointly performed with the plastic surgeon.

breast surgeons that staying relevant in the field must include having an OPS skill set. However, compared with the rest of the international community, Canada has been fairly slow in its clinical uptake of OPS, with a recent study highlighting the lack of available formal training opportunities as a major barrier.<sup>5</sup> Oncoplastic surgery has not traditionally been part of a general surgeon's residency training, nor has it been a formal part of Canadian breast or general surgical oncology fellowship training. These fellowships have traditionally emphasized the development of surgical expertise in the multidisciplinary management of breast disease, with no formal OPS training built into the curriculum. Although fellows do spend time with local plastic surgeons, the scope of training is often limited to postmastectomy breast reconstruction and not methods for performing a cosmetically acceptable breast-conserving surgery while avoiding a mastectomy altogether. As such, Canadian OPS training has traditionally been independent of breast or general surgical oncology training programs.

Recently, owing to increasing demand, Western University and the University of Ottawa developed formal OPS fellowships of 1–2 years with the goal of teaching breast surgical oncology fellows or practising general surgeons to perform a full range of OPS techniques independently. These fellowships also emphasize the necessity of a plastic surgeon as an integral member of the multidisciplinary team in the management of patients with breast cancer. These fellowships, codirected by both breast and plastic surgeons, are the culmination of work on a dedicated OPS curriculum and represent an open collaboration between the 2 surgical specialties. The fellow can tailor the program to meet the demands of current or future academic or community-based positions by increasing training exposure to various plastic surgery techniques of breast reconstruction in order to further increase patient access to such joint surgical procedures (i.e., reduction mammoplasty, immediate prosthetic or autologous reconstruction).

## CANADIAN ONCOPLASTIC COURSES FOR THE PRACTISING SURGEON

Practising Canadian surgeons currently performing OPS have generally obtained their skills through courses taken internationally,<sup>5</sup> as historically this has been an unmet need in Canada. In partnership with the University of Toronto, University of Ottawa and Western University, the Canadian Breast Surgery Innovations (CBSI) group began offering full-day OPS workshops in late 2016. This group, consisting of expert academic and community OPS surgeons, created the workshop with the goal of raising the standard of breast surgery delivered in Canada. These workshops are currently offered every few months and have been held in conjunction with national or regional general surgery or breast cancer conferences to maximize exposure and enrollment. The workshops include a combination of didactic lectures, comprehensive videos, case discussions and hands-on cadaveric dissections under direct supervision. Participants learn a range of oncoplastic techniques and tips and tricks for effective and efficient collaborations with plastic surgeons, patient selection for OPS, and assessing cosmetic results and patient satisfaction. Workshops are not-for-profit to maximize enrollment and training opportunities. All workshops to date have sold out in 24–72 hours. Further workshops took place in Ottawa and London in October and November, and more are planned throughout Canada (<https://oncoplasticpartnershipworkshop.ca>).

## CONCLUSION

Historically, most surgeons felt that a postlumpectomy cosmetic defect or contour deformity was a small price to pay for curing breast cancer while avoiding a mastectomy. Today, with recent advances in modern breast cancer management, women can look forward to a long, healthy life after their breast cancer diagnosis. It is more important than ever to offer them a treatment option that preserves their quality of life and their sense of attractiveness and femininity. Oncoplastic surgery techniques allow the surgeon to not only completely excise the disease, but also maintain excellent cosmesis. Hopefully there will be a steady rise in general and breast surgeons embracing OPS as they see the benefits reaped by patients who rightly demand better from us.

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