2. Cogliandro A, Barone M, Cassotta G, Tenna S, Cagli B, Persichetti P. Patient satisfaction and clinical outcomes following 414 breast reductions: Application of BREAST-Q. *Aesthetic Plast Surg.* 2017;41:245–249.
3. Tenna S, Cagli B, Brunetti B, Barone M, Persichetti P. Management of tuberous breast deformities: Review of long-term outcomes and patient satisfaction with BREAST-Q. *Aesthetic Plast Surg.* 2017;41:1249–1258.
4. Cogliandro A, Barone M, Tenna S, Morelli Coppola M, Persichetti P. The role of lipofilling after breast reconstruction: Evaluation of outcomes and patient satisfaction with BREAST-Q. *Aesthetic Plast Surg.* 2017;41:1325–1331.
5. Cogliandro A, Brunetti B, Barone M, Favia G, Persichetti P. Management of contralateral breast following mastectomy and breast reconstruction using a mirror adjustment with crescent mastopexy technique. *Breast Cancer* 2018;25:94–99.

Direct-to-Implant versus Two-Stage Tissue Expander/Implant Reconstruction: 2-Year Risks and Patient-Reported Outcomes from a Prospective, Multicenter Study

Sir:

We congratulate Srinivasa et al. for their thoughtful article entitled "Direct-to-Implant versus Two-Stage Tissue Expander/Implant Reconstruction: 2-Year Risks and Patient-Reported Outcomes from a Prospective, Multicenter Study" in *Plastic and Reconstructive Surgery*.[1] The authors conducted a prospective cohort study including 57 plastic surgeons in 11 cancer centers across North America and showed that single-stage breast reconstruction was not burdened with more complications, higher revision rate, or poorer patient-reported outcomes after adjusting for demographic and clinical characteristics. Although inspired, we found that several aspects of the publication require commentary to clarify the conclusion.

First, we are puzzled regarding the follow-up time, which also perplexes us in our relevant work. In the study, the authors defined the 2-year follow-up time from the initial placement of the tissue expander or implant in each cohort. Then, they stated that approximately 20 percent of the patients undergoing tissue expander/implant-based reconstruction had still not undergone exchange by 1 year. In this way, the women in this cohort would inevitably have less time to recover and be accustomed to their new bodies when assessed 2 years postoperatively. Moreover, the relatively shorter follow-up time might be not enough to capture the complications such as capsular contracture, which could require revision operations in this subgroup because of the delay in exchange procedures.

Furthermore, as the authors admitted, the multi-institutional study may provide large sample variations, including the varying levels of selection bias by surgeons. We would appreciate it if the authors would provide clarification regarding whether the surgeons had used total or partial muscular coverage of the expander/implant. The information is important and may explain why there is no statistically significant difference between the two study cohorts.

We strongly support the authors' claim that the use of patient self-reported measures should be valued, especially in the field of plastic and reconstructive surgery. We advocate that the use of the BREAST-Q questionnaire[2] should become part of the routine management of patients who are candidates for breast reconstructive surgical procedures. The evidence-based results would enable future breast cancer patients to make a more informed decision with full understanding of the risks and benefits of each option.

DOI: 10.1097/PRS.0000000000004479

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DISCLOSURE

The authors have no financial interest to declare in relation to content of this study. No funding was received for this communication.

REFERENCES

1. Srinivasa DR, Garvey PB, Qi J, et al. Direct-to-implant versus two-stage tissue expander/implant reconstruction: 2-year risks and patient-reported outcomes from a prospective, multicenter study. *Plast Reconstr Surg.* 2017;140:869–877.
2. Coriddi M, Nadeau M, Taghizadeh M, Taylor A. Analysis of satisfaction and well-being following breast reduction using a validated survey instrument: The BREAST-Q. *Plast Reconstr Surg.* 2013;132:285–290.

Immediate Breast Reconstruction with Abdominal Free Flap and Adjuvant Radiotherapy: Evaluation of Quality of Life and Outcomes

Sir:

It was with great pleasure that we read the interesting article by Pont et al.[1] entitled "Immediate Breast Reconstruction with Abdominal Free Flap and Adjuvant Radiotherapy: Evaluation of Quality of Life and Outcomes," and we congratulate the authors on their thoughtful analysis of outcomes. Use of radiation therapy is widespread in breast cancer treatment,

and its indications, especially in the adjuvant setting, have broadened. Until recently, postoperative radiotherapy was generally recommended only for patients with tumor-positive margins, T3 to T4 tumors, or four or more positive lymph nodes. However, several clinical trials have documented a survival advantage for patients with stage II tumors and fewer than four involved nodes who receive adjuvant radiotherapy.[2,3] The results of these prospective trials have led to an increasing number of intermediate- to high-risk patients receiving postmastectomy radiotherapy in an effort to improve both locoregional control and overall survival. Recently, retrospective studies on postmastectomy locoregional recurrence and prospective clinical trials have documented benefits of postmastectomy radiation therapy for patients with one to three positive axillary nodes.[4] Thus, an increasing number of mastectomy patients could nowadays undergo postmastectomy radiation therapy with potential negative effects on breast reconstruction, thus complicating the timing and the method of reconstruction used.

The negative effects of radiotherapy on implant-based breast reconstruction are well known, but are still controversial in the setting of autologous tissue-based breast reconstruction. Flap fibrosis, fat necrosis, and flap shrinkage have been reported.[5,6] Consequently, patients undergoing postmastectomy radiotherapy have been traditionally offered delayed autologous breast reconstruction in efforts to minimize postoperative complications and compromise of the quality of the transferred soft tissue. Delayed autologous breast reconstruction avoids exposure of flap tissue to radiation and offers the restoration of a breast mound that approximates natural breast tissue. These benefits come at a price to the patient, who lives without a breast for a substantial period. Immediate breast reconstruction, in contrast, optimizes breast aesthetics by limiting scars and potentially avoids the psychosocial sequelae of a mastectomy alone.

Apparently, the authors evaluated in their study only fat necrosis in terms of complications and they reported no differences between irradiated and non-irradiated patients. It would have been interesting to compare postmastectomy irradiated patients who had undergone delayed autologous breast reconstruction with immediate reconstruction patients and verify whether the immediate group had a greater rate of fat necrosis compared with the delayed group. Furthermore, patients with a higher body mass index have significantly greater odds for breast complications, and we ask the authors whether they found some relationship and differences in major and minor complications, including delayed wound healing, infection, and flap loss. Also, preoperative chemotherapy might play a role in the incidence of fat necrosis and overall complications. Finally, we have to consider that irradiation protocols might differ from center to center, and many advances in radiotherapy techniques, including three-dimensional planning and simple intensity modulation, which allow for greater dose homogeneity within the treated fields, have been achieved, thus optimizing radiotherapy treatment.

DOI: 10.1097/PRS.0000000000004521

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DISCLOSURE

The authors have no financial interest to declare in relation to the content of their communication.

REFERENCES

1. Pont LP, Marcelli S, Robustillo M, et al. Immediate breast reconstruction with abdominal free flap and adjuvant radiotherapy: Evaluation of quality of life and outcomes. *Plast Reconstr Surg.* 2017;140:681–690.
2. Ragaz J, Jackson SM, Le N, et al. Adjuvant radiotherapy and chemotherapy in node-positive premenopausal women with breast cancer. *N Engl J Med.* 1997;337:956–962.
3. Ragaz J, Olivotto IA, Spinelli JJ, et al. Locoregional radiation therapy in patients with high-risk breast cancer receiving adjuvant chemotherapy: 20-year results of the British Columbia randomized trial. *J Natl Cancer Inst.* 2005;97:116–126.
4. Overgaard M, Nielsen HM, Overgaard J. Is the benefit of postmastectomy irradiation limited to patients with four or more positive nodes, as recommended in international consensus reports? A subgroup analysis of the DBCG 82 b&c randomized trials. *Radiother Oncol.* 2007;82:247–253.
5. Barry M, Kell MR. Radiotherapy and breast reconstruction: A meta-analysis. *Breast Cancer Res Treat.* 2011;127:15–22.
6. Rogers NE, Allen RJ. Radiation effects on breast reconstruction with the deep inferior epigastric perforator flap. *Plast Reconstr Surg.* 2002;109:1919–1924; discussion 1925–1926.

Clinical and Quantitative Isokinetic Comparison of Abdominal Morbidity and Dynamics following DIEP versus Muscle-Sparing Free TRAM Flap Breast Reconstruction

Sir:

Decades after the introduction of free autologous breast reconstruction, abdominal wall function after surgery remains a key concern and influence on surgical decision-making. With progression toward minimizing donor-site morbidity, the deep inferior epigastric artery perforator (DIEP) flap allows for preservation of the rectus muscle to the extent possible. However, all who perform a high volume of such procedures know that many DIEP flaps require varying