Editorial

Introduction to "Advances in Microsurgical Breast Reconstruction"

Since the advent of the free transverse rectus abdominis myocutaneous (TRAM) flap for breast reconstruction in 1979 (1), microsurgical indications, techniques and outcomes have evolved tremendously to define a completely new standard in the overall care of breast reconstruction patients. This standard is based on reconstructive outcomes that epitomize aesthetic ideals with minimal donor site morbidity, standardized protocols that result in efficient operations and faster recovery timelines, and high levels of long-term patient satisfaction.

Many advances in microsurgery have contributed to these outcomes including refinements in microsurgical technique, flap dissection, novel donor sites, emphasis on total patient care, focus on patient desires and satisfaction and critical analysis of outcomes. The articles in this *Gland Surgery* special series are focused on the concepts in autologous breast reconstruction that encompass these advances. The goal was to provide a comprehensive set of articles from leaders in the field that describe the current state of the forefront of microsurgery in breast reconstruction.

A major revolution in breast microsurgical breast reconstruction has involved optimization of preoperative, intraoperative and postoperative care to transform what used to be long operations with major hospital stays, to efficient, timely procedures with significantly faster recovery These advancements can be attributed to the development of multi-faceted enhanced recovery pathways, as reviewed by Stranix and colleagues, as well as the high-level optimization of team-based approaches in the operating room to microsurgery to cut down on operative times, as discussed by Haddock and colleagues.

Abdominally-based free flaps, particularly the deep inferior epigastric artery perforator (DIEP) flap, remain the gold standard for autologous reconstruction today. However, these surgeries have evolved significantly to through technical refinements to minimize morbidity and optimize reconstructive and aesthetic outcomes as reviewed by Dr. Nahabedian. Additionally, harnessing the power of stacked and conjoined flaps, as described by Karp and colleagues, has allowed for optimization of volume and perfusion from different donor sites. Tuinder and colleagues also describe the latest in flap reinnervation and optimizing sensory recovery after autologous reconstruction.

Secondary donor site for flaps have also become less "secondary" as flaps such as the profunda artery perforator (PAP) flap, as reviewed by Allen *et al.*, are being increasingly using for standalone, stacked or four-flap reconstructions. A highlight in microsurgical breast reconstruction has been a focus beyond simply reconstructive outcomes, but on breast aesthetics. Smith and colleagues review techniques for optimizing breast aesthetics in autologous reconstruction.

In addition, we hope to highlight certain topics that remain controversial, such as the timing of radiation and autologous breast reconstruction as reviewed by Chang and colleagues, while also shedding light on the future directions in this continually expanding field. Crisera and colleagues also discuss challenging cases in autologous reconstruction including obese and ptotic patients that have not always been considered candidates for these reconstructions. Oncoplastic breast reconstruction has allowed for the improvement of both oncologic and aesthetic outcomes in breast-conserving theory. Patel and colleagues review the evidence on applications of free tissue transfer in partial mastectomy reconstruction and exciting new avenues forward in oncoplastic microsurgery. Finally, Ray and colleagues described microvascular gender-affirming breast reconstruction.

We would like to sincerely thank all of the contributing authors as well as the editorial board and staff of *Gland Surgery* for their efforts and assistance in putting together this compendium. The persistent collaborative exchange of techniques, experiences, data and outcomes, as well as the ability to evolve and adapt our own paradigms will only further allow us to improve how we care for patients.

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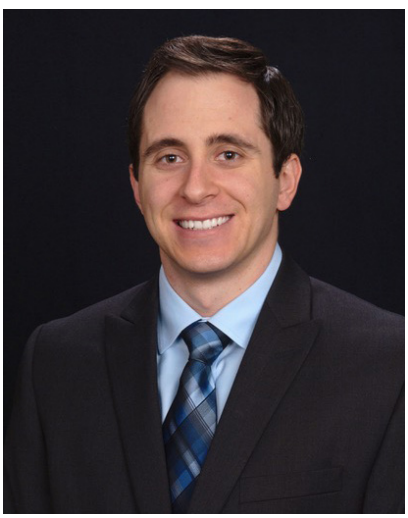

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