

Commentary on “Causes of Injury and Litigation in Cutaneous Laser Surgery: An Update From 2012 to 2020”

The article by Khalifian and colleagues¹ highlights an alarming trend that warrants considerable attention by dermatologic surgeons. Concurrent with the widespread commercialization of cosmetic procedures and their growing consumer demand, there has been a rise of nonphysician operators (NPOs) in the aesthetic field, who frequently practice in nonmedical settings without standardized training, sufficient physician oversight, and adequate federal regulations governing their practice.^{2,3}

Between 2012 and 2020, the authors demonstrated that NPOs account for most of the legal injury and liability claims resulting from the unsupervised operation of cutaneous laser surgery devices.¹ The percentage of claims against NPOs jumped from 41% of total claims between 1985 and 2012 to 71% in the subsequent 8 years, reflecting worsening of these practices in the past few decades.^{1,4} In the absence of a national standardized collection system for adverse events, the medicolegal literature often serves as a proxy for these aesthetic complications. The authors rightfully suggest that given the nature of a legal database review, the rates of reported litigation are likely an underrepresentation of the true number of such complications.

This article adds to a growing body of literature highlighting that cosmetic complications are associated with NPOs who are treating in nonmedical settings, such as medical spas, while citing improper training, education, technique, and device settings.^{2,5,6} Unfortunately, the practice guidelines for NPOs are regulated on a state-by-state basis, and there is significant variation, with many states even having ambiguous guidelines. Recent studies have demonstrated that 73% of states have more medical spas than aesthetic physicians, and many have medical directors who are on site less than half of the time.⁷⁻¹⁰ If gone unchecked, this trajectory poses the potential for significant harm to patients, who often find it difficult to distinguish between the licensing, credentials, and experience of their health care providers.^{11,12}

Although physician extenders play a vital role in our health care system, each position and field should be associated with its own designated roles, scopes of practice, and levels of autonomy that are commensurate with experience and training. The safe practice of cosmetic dermatology, including the use of lasers, energy-based devices, and injectables, requires an in-depth knowledge of cutaneous physiology and pathophysiology, complex facial

anatomy, laser physics, associated treatment end points and the ability to modify treatment parameters, properties of injectables, and recognizing and mitigating complications, among many other topics.

Dermatologic and plastic surgeons have progressively built this layered and nuanced fund of knowledge through extensive and rigorous training, including 4 years of medical school, 3 to 7 years of specialty-focused residency, and in some cases, 1 to 2 years of additional fellowship focused on cosmetic surgery. This translates to between 10,000 and 16,000 hours of clinical education and training at a minimum.¹³ Governing bodies additionally track the case numbers of physicians during training to ensure that graduating physicians have an adequate exposure in addition to their national board certification examinations. There are many checkpoints to ensure that these practicing physicians are able to safely treat their patients.

Although the FDA has stringent regulations for the distribution of new drugs, products, and devices, there must also be regulatory oversight and accountability that restrict the operation of such devices and procedures to those who have received adequate training.⁴ A small study surveying the American Society of Plastic Surgical Nurses in 2009 highlighted that many respondents were treating cosmetic patients with injectables independently after having only been supervised by a physician for less than 10 procedures.¹⁴ Equally concerning, respondents acknowledged that there were major knowledge gaps, including a method for basic patient cosmetic assessment, contraindications for injectables, knowledge on postprocedural complications, and strategies to manage complications when they arise.¹⁴

Dermatologic surgeons have been a main source for the research, development, and innovation of cosmetic procedures and as such, harbor extensive knowledge on how to safely operate new lasers and other energy-based devices.¹³ Physicians must use their expertise to serve as responsible gatekeepers to protect our field and our patients. There is a professional duty to vocally advocate to legislative bodies on the risks of medical spas and unsupervised NPOs. To this end, we strongly support the efforts by the American Society for Dermatologic Surgery to legislate the “Medical Spa Safety Act” and the recent creation of a standardized adverse event registry for aesthetic complications, known as CAPER.^{15,16}

References

1. Khalifian S, Vazirmia A, Mohan GC, Thompson KV, et al. Causes of injury and litigation in cutaneous laser surgery: an update from 2012-2020. *Dermatol Surg* 2022;48:315-19.

<http://dx.doi.org/10.1097/DSS.0000000000003376>

2. Wang JV, Albornoz CA, Goldbach H, Mesinkovska N, et al. Experiences with medical spas and associated complications: a survey of aesthetic practitioners. *Dermatol Surg* 2020;46:1543–8.
3. Wang JV, Albornoz CA, Zachary CB, Saedi N. Evolution of search trends for medical spas and cosmetic dermatologists: a 2009 to 2019 national comparison. *Dermatol Surg* 2021;47:872–4.
4. Jalian HR, Jalian CA, Avram MM. Common causes of injury and legal action in laser surgery. *JAMA Dermatol* 2013;149:188–93.
5. Rossi AM, Wilson B, Hibler BP, Drake LA. Nonphysician practice of cosmetic dermatology: a patient and physician perspective of outcomes and adverse events. *Dermatol Surg* 2019;45:588–97.
6. Suggs AK, Wang JV, Friedman PM. Experiences with corrective laser tattoo removal: dangers of nonphysician operators. *Dermatol Surg* 2021;47:1035–7.
7. Wang JV, Albornoz CA, Noell C, Friedman PM, et al. Skewed distribution of medical spas and aesthetic physician practices: a cross-sectional market analysis. *Dermatol Surg* 2021;47:397–9.
8. Wang JV, Shah S, Albornoz CA, Rohrer T, et al. Medical spa or physician practice: the national impact of patient wait times in aesthetics. *Dermatol Surg* 2021;47:887–9.
9. Gibson JF, Srivastava D, Nijhawan RI. Medical oversight and scope of practice of medical spas (med-spas). *Dermatol Surg* 2019;45:581–7.
10. Wang JV, Saedi N, Geronemus RG, Friedman PM. Medical spa facilities and non-physician operators in aesthetics. *Clin Dermatol* 2021. ePub ahead of print.
11. American Medical Association. *Truth in Advertising Survey: 2008 and 2010*. Available from <https://www.ama-assn.org/system/files/2020-10/truth-in-advertising-campaign-booklet.pdf>. Accessed December 12, 2021.
12. Coldiron B, Ratnarathorn M. Scope of physician procedures independently billed by mid-level providers in the office setting. *JAMA Dermatol* 2014;150:1153–9.
13. Nesi L, Belcher M, Decker A, Lawrence N. Midlevel injectable practice patterns in dermatology and plastic surgery offices. *Dermatol Surg* 2021;47:645–8.
14. Spear M. What are the necessary practice competencies for two providers: Dermal fillers and botulinum toxin type A injections? *Plast Surg Nurs* 2010;30:226–46.
15. American Society for Dermatologic Surgery. *Medical Spa Safety Act*. Available from <https://www.asds.net/Portals/0/PDF/asdsa/asdsa-medical-spa-safety-act.pdf>. Accessed December 12, 2021.
16. CAPER Registry. *The Cutaneous Procedures Adverse Events Reporting (CAPER) Registry*. Available from <https://www.caper.net>. Accessed December 12, 2021.

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