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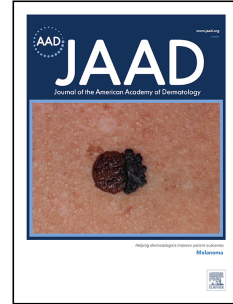

Strategies for Overcoming Obstacles to Hands-on Cosmetic and Laser Training in Dermatology Residency

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49 **Supplemental Material:** Mendeley Supplemental Table 1. Surveys of US dermatology resident-reported
50 experiences in cosmetic and laser training and preparedness for post-graduation practice
51 (https://data.mendeley.com/datasets/bs2v5yzzyw/1)
52
53 **Key Words:** Cosmetics; ACGME; Requirements; Cosmetic; Procedures; Dermatology; Opportunity;
54 Change
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56 To the Editor,

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58 Requirements for dermatology residents set by the Review Committee (RC) for Dermatology of the
59 Accreditation Council for Graduate Medical Education (ACGME) include demonstrating "knowledge of
60 proper techniques for botulinum toxin injections, soft tissue augmentation…and the use of light, laser,
61 and other energy-based modalities for skin conditions."[1] The ACGME sets minimum counts for residents
62 for 8 categories of dermatologic procedures.[2] Only 2 procedural categories require the residents serve as
63 the performing surgeon: "Excision - Benign Or Malignant" (50 minimum), and "Repair (Closure) –
64 Simple/Intermediate/Complex" (50 minimum). The remainder require no hands-on to meet the
65 experiential requirements. Observing someone else perform the procedure is sufficient. Three procedures
66 on the required list are cosmetic: "Laser – Combined (Ablative, Non-Ablative, Vascular)" (15 minimum,
67 performing or observing); "Botulinum Toxin Chemodeinnervation" (10 minimum, performing or
68 observing); and "Soft Tissue Augmentation/Skin Fillers" (5 minimum, performing or observing).

69

70 Program requirements do not specify how competence in cosmetic procedures should be demonstrated.
71 This is left to each program. However, there is agreement among teachers of cosmetic dermatology that
72 hands-on performance of cosmetic procedures as assistant or primary surgeon is indispensable for
73 developing competence.[3] Surveys of residents have demonstrated similar findings (**Mendeley**
74 **Supplemental Table 1**). Increased competence in cosmetic procedures may have a pragmatic benefit
75 since many in clinical practice perform such procedures routinely.

76

77 Obstacles to hands-on cosmetic training for residents include: (1) lack of recognition among departmental
78 leadership regarding the importance of such training; (2) limited time for procedural training; (3)
79 unavailability of equipment (e.g., lasers and energy devices); (4) absence of in-house teachers of
80 cosmetic dermatology ; (5) limited number of cosmetic cases per practice;[4] and (6) patients' preference
81 for receiving procedures from attendings.[5]

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83 However, solutions do exist. Residencies may offer hands-on for some but not all types of cosmetic
84 procedures, so that certain similar procedure categories could be combined to facilitate sufficient hands-
85 on cases. For instance, combining the neuromodulator and filler categories, or even combining all
86 cosmetic categories, might make a hands-on cosmetic procedure requirement easier to implement. There
87 are also many procedures that require minimal or inexpensive disposable equipment. Among such
88 procedures are chemical peels for resurfacing and pigment lightening, and subcision for treatment of
89 scars and cellulite. Finally, if training programs are unable to meet requirements, they may consider
90 encouraging resident attendance at city-wide, regional, or national training courses with expert cosmetic
91 dermatologists, and this can be supplemented with online resources (**Table 1**).
92
93 The ACGME RC for Dermatology monitors procedure log minimums for graduating dermatology
94 residents. The first time that the ACGME held dermatology programs accountable for minimums was
95 2013-2014. Since then, the number of cosmetic dermatologic procedures occurring in clinical practice
96 has skyrocketed, and the percentage of dermatology residency graduates performing these procedures in
97 practice has also climbed. For patient safety, we encourage the ACGME to perform an objective review
98 of cosmetic procedure counts as Resident Surgeon for recent (5 years, including pre-COVID) graduating
99 classes, then propose a data-driven hands-on minimum for cosmetic procedure categories for comment by
100 the residency community.
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102 **ABBREVIATIONS**

103 RC = Review Committee

104 ACGME = Accreditation Council for Graduate Medical Education

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118 **REFERENCES**
119

120 1. 2023 Program Requirements for Graduate Medical Education in Dermatology. Accreditation
121 Council for Graduate Medical Education (ACGME). Revision effective July 1, 2023. Accessed
122 April 4, 2024. https://www.acgme.org/Specialties/Dermatology/Program-Requirements-and-
123 FAQs-and-Applications
124 2. Review Committee for Dermatology. Case Log Minimums. Accreditation Council for Graduate
125 Medical Education (ACGME). Published May 2019. Accessed April 4, 2024.
126 https://www.acgme.org/globalassets/pfassets/programresources/caselogminimums.pdf
127 3. Minkis K, Bolotin D, Council ML, et al. Needs and Gaps in Resident Trainee Education, Clinical
128 Patient Care, and Clinical Research in Cosmetic Dermatology: Position Statement of the
129 Association of Academic Cosmetic Dermatology. Arch Dermatol Res. 2022 Dec 3. doi:
130 10.1007/s00403-022-02471-8. Epub ahead of print. PMID: 36463367.Housman TS, Hancox JG,
131 Mir MR, Camacho F, Fleischer AB, Feldman SR, Williford PM. What specialties perform the
132 most common outpatient cosmetic procedures in the United States? Dermatol Surg. 2008
133 Jan;34(1):1-7; discussion 8. doi: 10.1111/j.1524-4725.2007.34000.x. Epub 2007 Dec 5. PMID:
134 18053058.
135 4. Bauer B, Williams E, Stratman EJ. Cosmetic dermatologic surgical training in US dermatology
136 residency programs: identifying and overcoming barriers. JAMA Dermatol. 2014
137 Feb;150(2):125-9. doi: 10.1001/jamadermatol.2013.6713. PMID: 24337066.
138 5. Hemal K, Cignetti NE, Newsom MR, et al. Consumer Awareness and Comfort with Resident-run
139 Cosmetic Clinics: A Crowdsourcing Study. Plast Reconstr Surg Glob Open. 2021;9(7):e3681.
140 Published 2021 Jul 12. doi:10.1097/GOX.0000000000003681.

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142 **Table 1. In-person and online resources for residents to learn cosmetic and laser dermatology.**
143
144

Dermatology Resident Training Resources for Cosmetic and Laser Procedures
In-person conferences and courses
AAD Annual Meeting
AAD Hands-On: Cosmetics
ASDS Annual Meeting
ASDS Expertise Summit: Surgery. Injectables.
ASDS Premier Annual Resident Cosmetic Symposium
ASLMS Annual Meeting
Cosmetic Bootcamp
IMCAS World Congress (Paris)
Controversies & Conversations
Online resources
AACD Journal Club
AACD Resident Reading List
ASDS Learn
ASDS Primer in Dermatologic Surgery
ASLMS Early Career Educational Resources

145
146 Abbreviations: AAD = American Academy of Dermatology; ASDS = American Society for
147 Dermatologic Surgery; ASLMS = American Society for Laser Medicine and Surgery; AACD =
148 Association of Academic Cosmetic Dermatology; IMCAS = International Master Course on Aging
149 Science
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