

UC Davis

Dermatology Online Journal

Title

A national survey comparing practice patterns and residency training satisfaction for categorical dermatology versus combined internal medicine and dermatology trained physicians

Permalink

<https://escholarship.org/uc/item/8kq929qx>

Journal

Dermatology Online Journal, 29(3)

Authors

Han, Joohee
Ronkainen, Sanna D
Jacobsen, Audrey
[et al.](#)

Publication Date

2023

DOI

10.5070/D329361425

Copyright Information

Copyright 2023 by the author(s). This work is made available under the terms of a Creative Commons Attribution-NonCommercial-NoDerivatives License, available at <https://creativecommons.org/licenses/by-nc-nd/4.0/>

Peer reviewed

A national survey comparing practice patterns and residency training satisfaction for categorical dermatology versus combined internal medicine and dermatology trained physicians

Joohee Han^{1,2*} MD, Sanna D Ronkainen^{3*} MD, Audrey Jacobsen¹ MD, Kimberly A Bohjanen¹ MD, Joseph F Merola^{4,5} MD MMSc, Maria L Colavincenzo⁶ MD, Christine A DeWitt⁷ MD, Nicole M Fett⁸ MD MSCE, Anna Haemel⁹ MD, Misha Rosenbach¹⁰ MD, Victoria P Werth^{10,11} MD, Scott Lunos¹² MS, Noah Goldfarb^{1,2,13} MD

*Authors contributed equally

Affiliations: ¹Department of Dermatology, University of Minnesota, Minneapolis, Minnesota, USA, ²Department of Dermatology, Minneapolis Veterans Affairs Medical Center, Minneapolis, Minnesota, USA, ³INOVA Schar Cancer Institute, Fairfax, Virginia, USA, ⁴Department of Dermatology, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts, USA, ⁵Division of Rheumatology, Department of Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts, USA, ⁶Department of Dermatology, Northwestern University Feinberg School of Medicine, Chicago, Illinois, USA, ⁷Department of Dermatology, MedStar Georgetown University Hospital-Washington Hospital Center, Washington, District of Columbia, USA, ⁸Department of Dermatology, Oregon Health and Science University, Portland, Oregon, USA, ⁹Department of Dermatology, University of California San Francisco, San Francisco, California, USA, ¹⁰Department of Dermatology, University of Pennsylvania Perelman School of Medicine, Philadelphia, Pennsylvania, USA, ¹¹Department of Dermatology, Corporal Michael J Crescenz Veterans Affairs Medical Center, Philadelphia, Pennsylvania, USA, ¹²Clinical and Translational Science Institute/Biostatistical Design and Analysis Center, University of Minnesota, Minneapolis, Minnesota, USA, ¹³Department of Internal Medicine, Minneapolis Veterans Affairs Medical Center, Minneapolis, Minnesota, USA

Corresponding Author: Noah Goldfarb MD, 516 Delaware Street SE, Mail Code 98, Phillips Wangensteen Building, Suite 1-400, Minneapolis, MN 55455, Tel: 917-544-8272, Email: gold0414@umn.edu

Abstract

Combined internal medicine and dermatology (med-derm) training programs were created to advance complex medical dermatology and inpatient dermatology care. A prior study demonstrated that compared to categorical dermatology residents, med-derm residents had less program satisfaction, yet indicated a stronger desire to pursue careers in academia. No follow-up data on practice patterns after training has been reported. We aimed to characterize differences in residency program satisfaction and practice patterns between physicians trained in categorical dermatology compared to med-derm residency programs. We surveyed physicians who graduated from combined med-derm programs along with their counterparts, from six institutions, that either currently or historically had a combined med-derm training, from 2008-2017. Fifty-five percent of med-derm and forty-one percent of categorical-trained physicians responded. The practice patterns between the two

groups were similar. A quarter of med-derm physicians continued to provide general internal medicine services. Categorical trained physicians were significantly more satisfied with their training (P=0.03) and performed more excisions on the head/neck (P=0.02). The combined graduates had significantly greater confidence in multidisciplinary care (P=0.003), prescribed more biologic (P<0.001) and non-biologic immunosuppressive agents (P=0.002), and volunteered more for the underserved patients in their communities (P=0.04). Although few differences in overall practice patterns between categorical and med-derm trained graduates were appreciated, med-derm graduates seem more comfortable with multidisciplinary care and may care for more medically complex patients requiring immunosuppression.

Keywords: dermatology, internal medicine, residency, med-derm, practice patterns, training

Introduction

Of the 150 Accreditation Council for Graduate Medical Education (ACGME)-approved dermatology and 525 internal medicine programs, there have been only eight combined internal medicine and dermatology (med-derm) training programs in the United States [1-3]. These combined programs allow trainees to become board-eligible for both internal medicine and dermatology in five years and allow pursuit of fellowships in either specialty. Med-derm programs were, in part, developed in response to changing Medicare reimbursement rates, which limited funding for trainees seeking expanded training in internal medicine [4]. In addition, these programs were developed to fill a gap in complex medical dermatology, inpatient consults, and care for patients with multiple co-morbidities, as well as to support a pipeline into academic dermatology.

Prior studies have cited a shortage of medical dermatologists [5], dermatologists providing inpatient consultations [6-7], and academic dermatologists [8-12]. In 2015, a national survey demonstrated that compared to categorical dermatology residents, med-derm residents had less program satisfaction yet indicated a stronger desire to pursue careers in academia [13]. The med-derm residents were also more likely to be interested in inpatient consultation and caring for medically complicated patients such as patients with connective tissues diseases, psoriasis, autoimmune blistering diseases, and infectious diseases [13]. Since that publication, there has not been any follow-up data on the actual post-residency practice patterns of graduates of med-derm programs compared to their categorical counterparts.

We aimed to evaluate the differences in program satisfaction and post-residency practice patterns among physicians trained in med-derm versus those trained in categorical dermatology programs.

Methods

This was a multi-institution, cross-sectional, survey-based cohort analysis. We surveyed graduates who completed an American Board of Internal Medicine/American Board of Dermatology-

accredited med-derm residency and their categorical dermatology counterparts at six training institutions that offered both training programs at the time of the survey (Harvard Combined Program; Northwestern University; University of Minnesota; University of Pennsylvania; University of Wisconsin; Washington Hospital Center). All six training institutions were contacted about the number of graduates from their respective programs from the **program's inception to 2017. An anonymous survey** was created through the REDCap software [14] and distributed by the respective program administrators via direct Email communication. Basic demographic information was collected without individually-identifiable data. Questions of program satisfaction, current practice satisfaction, and post-residency confidence and comfort were answered using a visual analog scale. The majority of questions regarding practice patterns were answered in yes/no or multiple-choice format. We also asked two open-ended questions to the med-derm residents regarding the value of med-derm residency programs and what change they would have made to their med-derm program. Descriptive statistics were used to summarize the data. Med-derm and categorical resident responses were compared using **Fisher's exact tests (categorical questions)** or t-tests (visual analog scale questions). SAS software, version 9.3 (SAS Institute Inc, Cary, NC) was used for the statistical analysis. Open-ended questions were first reviewed to identify themes and analyzed using descriptive statistics. This study was reviewed by the University of Minnesota Institutional Review Board (IRB) and determined to be IRB exempt (00001970). The primary outcomes were differences in practice, volunteerism, confidence level in various clinical scenarios, and program satisfaction.

Results

From the six institutions offering both med-derm and categorical dermatology training programs at the time of survey distribution, a total of 53 residents graduated from the med-derm programs and 172 residents graduated from the categorical dermatology programs from the years between 2008-2017. The survey was distributed to 51 med-

derm and 169 categorical dermatology graduates. Twenty-eight of 51 (55%) med-derm and 69 of 169 (41%) categorical-trained graduates responded.

There were no significant differences in the demographic characteristics between the med-derm

Table 1. Respondent demographics.

Responses Number (%)	Categorical N=69	Med-derm N=28	P value
Response rate	69/169 (41%)	28/51 (55%)	0.08
Gender			0.74
Female	48 (70)	18 (64)	
Male	20 (29)	10 (36)	
Prefer not to answer	1 (1)	-	
Race [#]			
White	51 (74)	19 (68)	
Black or African	3 (4)	-	
Asian	15 (22)	3 (11)	
Native American or Alaska Native	-	1 (11)	
Other	-	3 (11)	
Prefer not to answer	2 (3)	3 (11)	
Ethnicity			0.06
Non-Hispanic	64 (93)	24 (86)	
Hispanic	3 (4)	-	
Prefer not to answer	2 (3)	4 (14)	
Degree(s) [#]			-
MD	69 (100)	28 (100)	
PhD	10 (14)	1 (4)	
MBA	1 (1)	1 (4)	
MS	3 (4)	3 (11)	
Other	4 (6)	-	
Pursued dermatology fellowship	30 (43)	1 (4)	<0.0001*
Dermatology fellowships pursued			-
Pediatric dermatology	7 (10)	-	
Dermatologic surgery	7 (10)	-	
Dermatopathology	7 (10)	-	
Research	4 (6)	-	
Currently in fellowship	2 (3)	-	1.0

[#]Survey respondents were allowed to choose more than one. Med-derm, combined internal medicine and dermatology training programs. Zero values are represented by "-". P values are from Fisher's exact tests. P values <0.05 were considered statistically significant (indicated by *).

and categorical dermatology graduates (Table 1). More females compared to males completed the survey. The majority of the respondents were White and non-Hispanic. All categorical dermatology and med-derm trained physicians held an MD degree whereas the categorical graduates were more likely to have additional advanced degrees and have previous residency training experiences. Post-graduation, 86% of med-derm graduates completed the internal medicine board examinations with 92% passing rate. Compared to med-derm graduates, significantly more categorical dermatology residents pursued fellowships (43% versus 4%, $P < 0.0001$).

Med-derm and categorical dermatology graduates demonstrated differences in program satisfaction (Table 2). Using a visual analog scale with a score of one indicating very unsatisfied to a score of 100 indicating very satisfied, the mean score for satisfaction with dermatology training was higher for the categorical dermatology compared to med-derm graduates (90.2 versus 80.6, $P = 0.03$). In reflection, 25% of the med-derm trained physicians would not have pursued combined med-derm training again.

Thirty-six percent of med-derm graduates indicated that they believed they were treated differently from the internal medicine colleagues and from their dermatology colleagues. Although 75% of med-derm graduates were satisfied with their respective programs, 25% would have changed the structure of the combined med-derm program. In response to the question, "if you chose 'yes' for wanting to change the structure of your combined training, how would you have wanted it changed," 22% of med-derm graduates would have made rotations such as cardiac care unit, intensive care unit, and cardiology non-mandatory. The majority (56%) would have done more med-derm and subspecialty dermatology clinical training.

In response to the question, "what do you see as the value of med-derm" 85% of the med-derm graduates responded that the combined med-derm program produces well-rounded physicians, with a better understanding and management skills of systemic diseases and sick patients. In addition, they believed that med-derm graduates were more comfortable

Table 2. Program and practice satisfaction.

Responses Number (%)	Categorical N=69	Med-derm N=28	P value
Satisfaction visual analog scale 0-100, mean (SD)			
Satisfaction with Dermatology training	90.2 (14.4)	80.6 (20.4)	0.03*
Satisfaction with Internal Medicine training		81.8 (17.3)	
Satisfaction with current practice	79.0 (18.0)	83.8 (13.2)	0.21
Program satisfaction yes/no responses, number (%)			
Reflecting on your training and current clinical practice, would you have pursued combined residency again?			
Yes		21 (75)	
No		7 (25)	
Did you feel you were treated differently from internal medicine colleagues?			
Yes		10 (36)	
No		18 (64)	
Did you feel you were treated differently from dermatology colleagues?			
Yes		10 (36)	
No		18 (64)	
Open-ended question, number (%)			
What do you see as the value of med-derm?			
Well-rounded physician/better understanding and management of systemic diseases and sick patients		23 (85%)	
More comfortable with systemic medications		6 (22%)	
Relationships with other specialties/increased collaboration		5 (19%)	
I practice both specialties		3 (11%)	
Teaching opportunities		2 (7%)	
Increased opportunities		1 (4%)	
Leadership skills		1 (4%)	
More respect for dermatology by colleagues		1 (4%)	

Med-derm, combined internal medicine and dermatology training programs.

P values are from a t-test. P values <0.05 were considered statistically significant (indicated by *). The N for value of med-derm question responses were lower due to the decreased responses to these questions.

with systemic medications and collaborative relationships with other specialties. Finally, they perceived that the med-derm training allowed them to practice both specialties and increased teaching opportunities.

The overarching practice patterns between the med-derm trained graduates compared to their counterparts demonstrated no significant differences (Table 3). About fifty percent of categorical and med-derm graduates practiced in an urban setting at an academic health center. The majority of both categorical and combined med-derm graduates held a full-time academic faculty position. Between the two groups, there was no difference in grant funding (data not shown; P=1.0)

from either the National Institute of Health or Dermatology Foundation or the number of publications in the prior year (data not shown; P=0.34).

The majority of med-derm and categorical trained graduates practiced in general outpatient dermatology followed by inpatient consult dermatology and outpatient dermatologic surgery. A quarter of med-derm trained graduates provided general internal medicine services such as practicing as an inpatient general medicine hospitalist. Significantly more med-derm graduates volunteered in an underserved area in their community (57% versus 33%, P=0.04) and volunteered in general (61% versus 34%, P=0.02).

Table 3. Practice demographics.

Responses Number (%)	Categorical N=67	Med-derm N=28	P value
Type of Community			
Urban	48 (72)	23 (82)	0.61
Urban cluster	17 (25)	5 (18)	
Rural	1 (1)	–	
Missed	1 (1)	–	
Practice type [#]			
Academic health center	30 (45)	14 (50)	0.66
Hospital-based practice	8 (12)	7 (25)	0.13
Multispecialty practice	15 (22)	7 (25)	0.79
Private/solo Practice	20 (30)	6 (21)	0.46
Academic affiliation			
Full time academic faculty	27 (40)	14 (50)	0.35
Part time academic faculty	4 (6)	1 (4)	
Affiliate or adjunct faculty	7 (10)	1 (4)	
Other	1 (1)	2 (7)	
No academic affiliation	28 (42)	10 (36)	
Clinical dermatology services [#]			
General outpatient dermatology	56 (84)	27 (96)	0.10
Inpatient primary dermatology service	31 (46)	17 (61)	0.26
Outpatient dermatologic surgery	29 (43)	12 (43)	1.0
Outpatient pediatric referral dermatology	15 (22)	5 (18)	0.78
Other dermatology subspecialty	9 (13)	4 (14)	1.0
Dermatopathology	9 (13)	–	0.05
General internal medicine services [#]			
Inpatient general medicine hospitalist		4 (14)	
Outpatient primary care		3 (11)	
Emergency department or urgent care		2 (7)	
Medicine subspecialty outpatient services		1 (4)	
None		21 (75)	
Volunteerism [#]			
Volunteer for underserved country outside U.S.	7 (10)	3 (11)	1.0
Volunteer for underserved area in your community	22 (33)	16 (57)	0.04*
Volunteer in your community or outside U.S.	23 (34)	17 (61)	0.02*

Med-derm, combined internal medicine and dermatology training programs. Zero values represented by "–". P values are from Fisher's exact tests. P values <0.05 were considered statistically significant (indicated by *).[#]Survey respondents were allowed to choose more than one. The N for value of categorical and med-derm question responses were lower due to the decreased responses to these questions.

In terms of clinical characteristics, med-derm graduates prescribed significantly more biologic (P<0.001) and non-biologic immunosuppressive agents (P=0.002), (Table 4). Procedures performed in practice were similar among combined and categorical graduates except categorically trained graduates performed significantly more excisions on the head and neck area (P=0.02).

There were minimal differences in confidence and comfort levels in various clinical scenarios between the combined med-derm and categorical graduates (Table 5). Of the few differences, med-derm trained

graduates were significantly more comfortable with managing patients expressing anger (P=0.008) and providing multidisciplinary care (P=0.003).

Discussion

In an effort to reverse the decline in medical dermatology and hospitalist dermatology, a proposal for a five-year combined internal medicine-dermatology residency program was spearheaded by the Medical Dermatology Society and was approved by the American Board of Dermatology

Table 5. Confidence/comfort level in various clinical scenarios.

Responses	Categorical N=67	Med-derm N=28	P value
Confidence/comfort level visual analog scale 0-100, mean (SD) {median}			
Comfortable with multidisciplinary care	82.5 (15.0) {85}	92.3 (11.5) {96}	0.003*
Comfortable managing expectations of patients with increased demands	75.5 (14.7) {77}	80.8 (14.1) {83}	0.11
Comfortable with patients expressing anger	70.6 (17.9) {72}	80.8 (13.4) {80}	0.008*
Confident assessing and making recommendations for photoaging	61.5 (25.4) {65}	65.8 (24.8) {72.5}	0.45
Confidence in billing	72.6 (18.5) {73}	74.9 (17.0) {78.5}	0.56

Med-derm, combined internal medicine and dermatology training programs.

P values are from a t-test. P values <0.05 were considered statistically significant (indicated by *).

and the American Board of Internal Medicine in 2000 [15-17]. The combined med-derm residency programs provide integrated training, allowing board-certification in these two disciplines, provide opportunities to pursue fellowships in either specialty, and specifically prepare graduates to care for the most medically complex patients in dermatology.

Similar to the 2015 survey study [13], categorically trained dermatologists were significantly more satisfied with their training and about a quarter of med-derm trained dermatologists would not have chosen combined training again. Although indicating less satisfaction with their training, the majority of med-derm graduates found value in their combined training. The combined med-derm training program was valued for producing well-rounded physicians. More specifically, med-derm graduates have indicated that the combined training prepared them to better understand and manage systemic diseases and sick patients in addition to being more comfortable with systemic medications. Furthermore, the med-derm graduates had increased collaboration and relationships with practitioners of other specialties in medicine. In terms of post-residency practices, both categorical and med-derm trained physicians were equally satisfied. Limitations of the study include non-verifiable, subjective responses, selection bias, and observation bias. Of note, several of the study authors were med-derm trained (AH, AJ, MR, NF, NG, SR) and included as respondents in the survey (AH,

MR, NF, NG, SR). In addition, the majority of respondents from both categorical and med-derm programs were academic or affiliated with an academic institution, which may not fully represent the larger group.

Further studies are needed to understand the disparities in program satisfaction between med-derm trained residents and categorically trained residents. For example, our study suggests that there may be a difference in how med-derm residents are being treated compared to their peers, with 36% of the combined graduates indicating they were being treated differently from their peers in both specialties. Providing flexibility in the selection of internal medicine and dermatology subspecialty rotations, with an increased emphasis on subspecialties related to complex medical dermatology, is one way to enrich the original goals of the combined med-derm program. And, in the same spirit, allowing some medicine subspecialties to be optional or reduced, such as cardiac and other forms of critical care. Understandably, these two areas of improvements do pose conflict with each other as increasing subspecialty med-derm training and reducing certain mandatory medicine rotations can impair the goal of integration and increase the likelihood that med-derm residents are not treated as equal. Therefore, finding the appropriate balance of these two possible suggestions need to be further explored.

Further, our study indicates that a substantial number of med-derm trained graduates do not

provide general medicine or primary care services. Given the limited size and number of med-derm programs, it is important to recruit and match residents who share the goal of med-derm initiatives. This requires the programs to be open and honest about the pros and cons of the combined med-derm training programs with the prospective applicants. Furthermore, creation of career opportunities post-residency specifically for combined med-derm trained physicians can enhance the goal of the med-derm training programs and provide a clear pipeline. Academic institutions, hospitals, and practices can create services and faculty positions that more easily allow combined med-derm graduates to incorporate general medicine, inpatient consults, or cross-specialty clinics into their practice, should they desire.

Conclusion

In summary, combined med-derm trained graduates have similar practice patterns to categorical-trained physicians, such that the majority practice general outpatient dermatology. However, a number of med-derm graduates also provide general internal medicine services specifically practicing as inpatient general medicine hospitalists. The med-derm

graduates are more comfortable with medically-complex patients and prescribe significantly more biologic medications and non-biologic immunosuppressive medications. This may be in part due to increased comfort with multidisciplinary care or with managing laboratory monitoring or drug side effects. In addition, med-derm graduates provide more care to underserved populations.

These findings demonstrate the complexities and challenges but also the added value of combined training regarding provider comfort with immunosuppressive medication and interdisciplinary care. In addition, many of the physicians continue to provide general medicine services. As residency training satisfaction scores were lower amongst med-derm trained physicians, future directions to improve training experience may include selecting more internal medicine inclined candidates, restructuring internal medicine rotations, and making sure residents are fully integrated into both dermatology and internal medicine residency programs.

Potential conflicts of interest

The authors declare no conflicts of interest

References

1. Residents and Fellows. American Board of Dermatology. 2022. www.abderm.org/residents-and-fellows.aspx. Accessed on February 27, 2022.
2. Number of Programs and Residents. American Board of Internal Medicine. 2022. www.abim.org/about/statistics-data/resident-fellow-workforce-data/number-of-programs-residents.aspx. Accessed on February 27, 2022.
3. Internal Medicine/Dermatology Policies. American Board of Internal Medicine. 2022. www.abim.org/certification/policies/combined-training/internal-medicine-dermatology/programs.aspx. Accessed on February 27, 2022.
4. Furda L, Duran-Nelson A, Bornshtein B. How combined internal medicine-dermatology residency programs can improve patient and population health. *Acad Med*. 2011;86:e3. [PMID: 22030667].
5. Resneck J Jr, Kimball AB. The dermatology workforce shortage. *J Am Acad Dermatol*. 2004;50:50-54. [PMID: 14699364].
6. Fox LP, Cotliar J, Hughey L, Kroshinsky D, Shinkai K. Hospitalist dermatology. *J Am Acad Dermatol*. 2009;61:153-154. [PMID: 19539858].
7. Helms AE, Helms SE, Brodell RT. Hospital consultations: time to address an unmet need? *J Am Acad Dermatol*. 2009;60:308-311. [PMID: 19150273].
8. Resneck JS Jr, Tierney EP, Kimball AB. Challenges facing academic dermatology: survey data on the faculty workforce. *J Am Acad Dermatol*. 2006;54:211-216. [PMID: 16443049].
9. Aquino LL, Wen G, Wu JJ. Factors affecting the pursuit of academic careers among dermatology residents. *Cutis*. 2015;95:231-236. [PMID: 25942025].
10. Kia KF, Gielczyk RA, Ellis CN. Academia is the life for me, I'm sure. *Arch Dermatol*. 2006;142:911-913. [PMID: 16847208].
11. Wu JJ. Observations on the ongoing shortage of academic dermatologists. *Cutis*. 2006;78:229-230. [PMID: 17121056].
12. Wheeler CE Jr, Briggaman RA, Lynch PJ, Miller LH. Shortage of full-time faculty in dermatology. *Arch Dermatol*. 1973;107:529-532. [PMID: 4697681].
13. Mostaghimi A, Wanat K, Crotty BH, Rosenbach M. A national survey of residents in combined Internal Medicine and Dermatology residency programs: educational experience and future plans. *Dermatol Online J*. 2015;21:13030/qt3dp4w5g0. [PMID: 26632794].
14. Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, et al. Research electronic data capture (REDCap)--a metadata-driven methodology and workflow process for providing translational

- research informatics support. *J Biomed Inform.* 2009;42:377-381. [PMID: 18929686].
15. Werth VP. Medical dermatology: a view to the future. *J Invest Dermatol.* 2006;126:528-9. [PMID: 16482185].
16. Werth VP, Voorhees J, Freedberg IM, Sontheimer RD. Preserving medical dermatology. A colleague lost, a call to arms, and a plan for battle. *Dermatol Clin.* 2001;19:583-92. [PMID: 11705347].
17. Fox LP, Cotliar J, Hughey L, Kroshinsky D, Shinkai K. Hospitalist dermatology. *J Am Acad Dermatol.* 2009;61:153-4. [PMID: 19539858].

Table 4. Practice characteristics.

Responses Number (%)	Categorical N=38	Med-derm N=27	P value
Number of prescribed biologic agents in the last month			
0 times	1 (3)	–	<0.001*
1-5 times	17 (45)	1 (4)	
6-10 times	8 (21)	11 (41)	
>10 times	12 (32)	15 (56)	
Number of systemic non-biologic immunosuppressive medications prescribed in the last month			
0 times	1 (3)	–	0.002*
1-5 times	22 (58)	5 (19)	
6-10 times	9 (24)	8 (30)	
>10 times	6 (16)	14 (52)	
Infusion medications in the last 12 months			
0 times	19 (50)	9 (33)	0.17
1-5 times	15 (39)	9 (33)	
6-20 times	2 (5)	5 (19)	
>20 times	2 (5)	4 (15)	
Number of melanomas or melanoma in situ biopsied in the last month			
0	4 (11)	1 (4)	0.18
1-3	16 (42)	15 (56)	
4-6	15 (39)	6 (22)	
7-9	1 (3)	4 (15)	
≥10	2 (5)	1 (4)	
Number of excisions in the last month			
0 times	6 (16)	6 (22)	0.33
1-5 times	6 (16)	8 (30)	
6-10 times	5 (13)	4 (15)	
>10 times	21 (55)	9 (33)	
Number of patients in average day of clinic			
<10	1 (3)	–	0.07
10-20	3 (8)	6 (23)	
21-30	16 (43)	14 (53)	
31-40	13 (35)	4 (16)	
>40	4 (11)	2 (8)	
Surgical procedures performed in practice [#]			
Simple excisions (head/neck)	30 (79)	13 (48)	0.02*
Simplex excisions (body)	33 (87)	23 (85)	1.0
Mohs surgery	3 (8)	1 (4)	0.64
Nail procedures	13 (34)	6 (22)	0.41
Other procedures performed in practice [#]			
Botulinum toxin (aesthetic)	20 (53)	12 (44)	0.62
Botulinum toxin (hyperhidrosis)	24 (63)	14 (52)	0.45
Soft tissue augmentation	14 (37)	7 (26)	0.44
Intralesional deoxycholic acid injection	4 (11)	4 (15)	0.71
Body sculpting	1 (3)	1 (4)	1.0
Vascular lesion laser	18 (47)	6 (22)	0.07
Ablative laser resurfacing	6 (16)	1 (4)	0.22
Non-ablative laser resurfacing	8 (21)	3 (11)	0.34
Pigmented lesion/tattoo removal laser	4 (11)	1 (4)	0.39
Laser hair removal	5 (13)	4 (15)	1.0
Chemical peels (superficial)	8 (21)	8 (30)	0.56
Chemical peels (medium/deep)	2 (5)	3 (11)	0.64
Sclerotherapy	2 (5)	2 (7)	1.0
None	10 (26)	10 (37)	0.42

Med-derm, combined internal medicine and dermatology training programs.

Zero values represented by “-”. P values are from Fisher’s exact tests. P values <0.05 were considered statistically significant (indicated by *). The N for value of categorical and med-derm question responses were lower due to the decreased responses to these questions.