

An Analysis of Publication Trends and Its Relationship with Academic Success Among Dermatology Residents and Fellows

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Background

Exposure to academic research is regarded as a meaningful component of medical training. Despite the importance placed on research activities, little is known regarding the extent to which dermatology residents participate in research during and after completion of residency training. As part of an initiative to determine if research output—measured as number of peer-reviewed publications—during residency is associated with future academic success across different medical specialties, we report our findings of publication trends among graduates of dermatology programs.

Methods

We assessed whether research productivity during residency predicted future research and academic success. We searched for names of graduates from a random sample of 50 reputable dermatology programs. For each of the 202 graduates included, we determined the number of peer-reviewed publications (before, during, and after residency), first authored peer-reviewed publications, H-index score, fellowship program, and if the graduate is currently working in a private or academic setting.

Results

One hundred dermatology residency programs were identified, for which 50 were included in our sample. Graduate rosters were available for 16 programs (32%) with a total 202 residents. The majority of graduates had 1-5 publications (94/202, 46.5%), with 28/202 (13.8%) having 0 publications and 8/202 (3.96%) having >30 publications. The average number of publications prior to residency was 0.98, 3.33 during residency, and 3.39 after residency. Overall, the average number of total publications per resident was 7.71. Greater than one-half of first-authored publications were completed during residency (347/635, 54.6%). Lastly, one-third of graduates (68/202, 33.6%) elected to pursue a fellowship, and 66 graduates (of 202, 32.6%) chose to pursue a career in academia after completion of residency training.

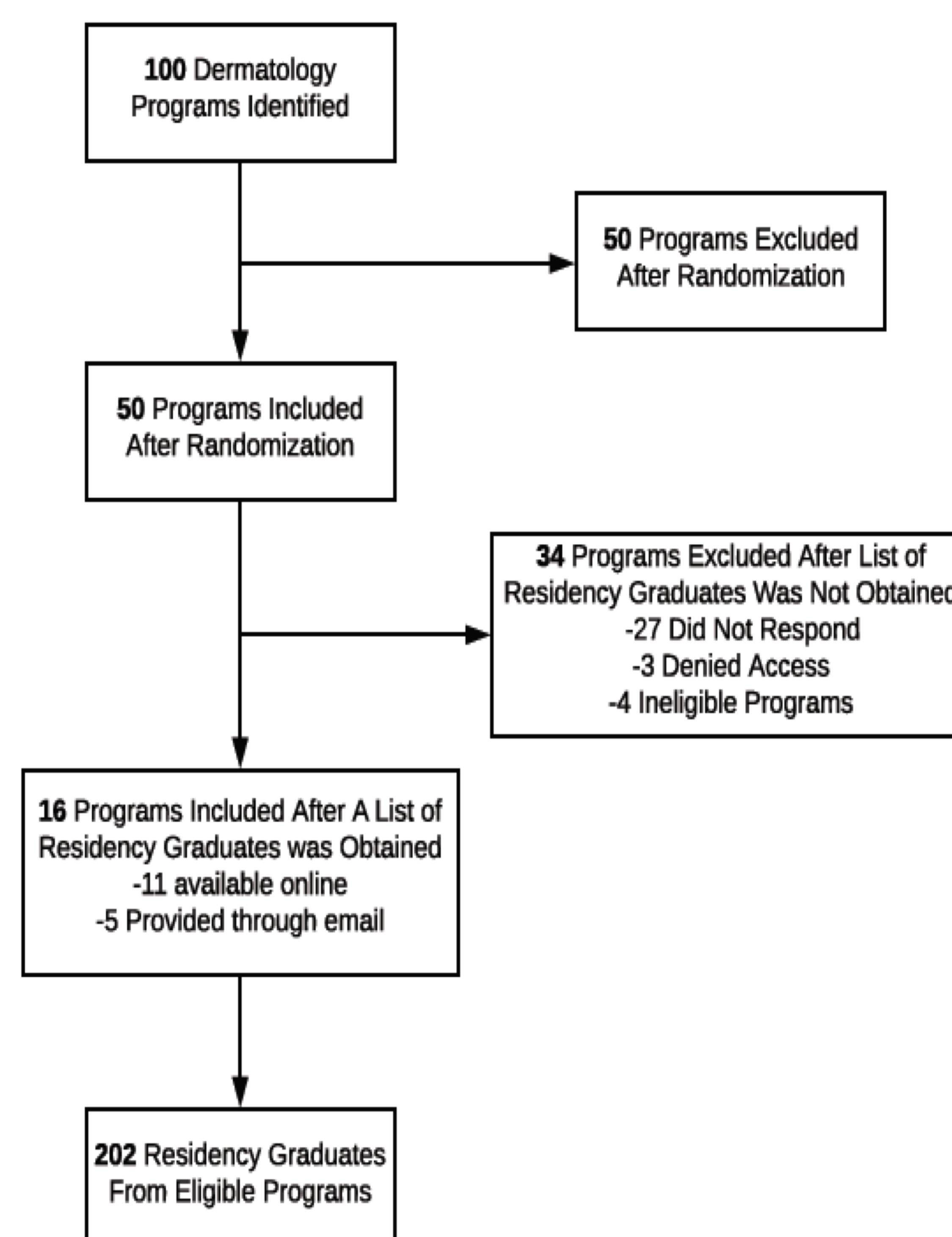


Figure 1: Included Dermatology graduates. Program lists were obtained via program websites or direct program coordinator contact.

Table 1. Resident Graduate Sample Characteristics

Characteristics	N (%)	[95% CI]
Sex (n=202)		
Male	50 (24.7)	[18.8-30.7]
Female	152 (75.2)	[69.2-81.1]
Medical Degree Obtained (n=202)		
M.D.	201 (99.5)	[98.5-100]
D.O.	1 (0.49)	[-0.47-1.46]
Current Setting of Practice (n=202)		
Academic	66 (32.6)	[26.2-39.1]
Private	136 (67.3)	[-0.47-1.46]
Pursued Fellowship (n=202)		
Yes	68 (33.6)	[27.1-40.1]
No	134 (66.3)	[59.8-72.8]
Fellowships (n=68)		
Clinical Research	7 (10.2)	[3.07-17.5]
Cosmetic Dermatology	2 (2.9)	[-1.07-6.95]
Cutaneous Oncology	3 (4.41)	[-0.46-9.29]
Dermatologic Surgery	2 (2.9)	[-1.07-6.95]
Dermatopathology	10 (14.7)	[6.28-23.1]
Laser and Aesthetic Surgery	3 (4.41)	[-0.46-9.29]
Mohs Surgery	12 (17.6)	[8.58-26.7]
Pediatric Dermatology	13 (19.1)	[9.77-28.4]
Pigmented Lesions/Melanoma	1 (1.47)	[-1.39-4.33]
Procedural Dermatology	12 (17.6)	[8.58-26.7]
Research Fellowship	1 (1.47)	[-1.39-4.33]
Rheumatology	2 (2.94)	[-1.07-6.95]
H-Index (n=202)		
0	35 (17.3)	[12.1-22.5]
1-5	132 (65.3)	[58.7-71.9]
6-10	22 (10.9)	[6.59-15.1]
11-15	8 (3.96)	[1.27-6.64]
>15	5 (2.47)	[0.33-4.61]
Number of Publications Per Resident		
0	28 (13.8)	[9.09-18.6]
1-5	94 (46.5)	[39.6-53.4]
6-10	40 (19.8)	[14.3-25.2]
11-15	12 (5.94)	[2.68-9.20]
16-20	9 (4.45)	[1.61-7.30]
21-25	6 (2.97)	[0.62-5.31]
26-30	5 (2.47)	[0.33-4.61]
>30	8 (3.96)	[1.27-6.64]

Table 2: Mean and median publication rates for residents before, during, and after completion of residency training

	Mean	Median	# of Publications
Before	0.98	0	199
During	3.33	2	674
After	3.39	1	686
Total	7.71	4	1559

Table 3: Mean and median first author publications before, during, and after completion of residency training

	Mean	Median	# of Publications
Before	0.43	0	87
During	1.71	1	347
After	0.99	0	201

Summary

Our results demonstrate that graduates of dermatology residency and fellowship programs are actively involved in research opportunities throughout their medical training. The value placed on research during dermatology training appears to carry with graduates into their postgraduate career, accounting for the relatively stable research production during and after residency. We emphasize the importance of active involvement in research during and after one's medical training in an effort to continually improve patient care standards.

