(US9655521 B2) that is assigned to Physical Sciences Inc and Memorial Sloan Kettering Cancer Center, which is related to the technology described in this study. Dr Rajadhyaksha is a former employee of and owns equity in Caliber Imaging and Diagnostics, Inc. The VivaScope is the commercial version of an original laboratory prototype that he had developed at Massachusetts General Hospital, Harvard Medical School. Dr Chen is the principal investigator of a research project sponsored by Apollo Medical Optics, Inc. Sahu. Cordova. Navarrete-Dechent. Drs González, and Marghoob have no disclosures or conflicts of interest to report. This research was completed without financial support from Caliber Imaging and Diagnostics, Inc, Memorial Sloan-Kettering Cancer Center, Physical Sciences Inc, or Apollo Medical Optics, Inc, and data were acquired and processed from patients by coauthors unaffiliated with any commercial entity.

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Dermatology education in geriatric fellowship programs: A nationwide survey of program directors



To the Editor: The growing elderly population has led to calls for more effective health care for aging adults. There is a critical role for dermatology within geriatrics and geriatrics training programs to manage common skin diseases in older people, 1 prevent drug-related iatrogenic complications, 2 and detect cutaneous signs of elder abuse. 3 In a previous study, geriatrics education in dermatology programs was

explored, and gaps were found in holistic treatment, including communication, ethical issues, and safe prescribing. However, little is known about formal dermatology curricula and education in geriatric fellowship programs. Building upon a prior study that examined dermatology education in internal medicine residency programs, we aimed to characterize and identify gaps in dermatology education in geriatric fellowship programs.

During May-June 2019, the program directors of all 154 Accreditation Council for Graduate Medical Education—accredited geriatric fellowship programs were invited to complete study surveys by using the REDCap software platform. Descriptive statistics and multiple logistic regression models were performed in SPSS version 24 (IBM Corporation, Armonk, NY).

Fifty-five (35.7%) out of the 154 programs responded to the survey. All fellowships were 1 year in length, and responding programs were representative of the national distribution (Table I). Twenty-two (40%) geriatrics programs did not offer dermatology clinical experience, and only 3 (5.5%) programs had an identified dermatology subspecialty coordinator (ie, a physician guiding the curriculum). Five (9.1%) programs had mandatory dermatology clinic rotations, and 3 (5.5%) had longitudinal dermatology experiences throughout the year. Most clinical experiences (70.9%) comprised <5 half-day clinic sessions over the course of the fellowship. The most common dermatology learning experiences offered were formal dermatology didactic lectures and board review, with few educational experiences in procedural skills or inpatient dermatology (Table I).

Overall, 60% (33/55) of the responding programs were at institutions with a dermatology residency program. The presence of a dermatology residency program was associated with a higher odds of having >5 half-day dermatology clinic sessions for geriatrics fellows (odds ratio 4.12, 95% confidence interval 1.01-16.76; Table II). The presence of a dermatology residency program was also associated with a nonsignificant increase in odds of having outpatient clinical experiences and dermatology faculty discussants at teaching conferences (Table II). Multivariate logistic regression revealed no statistically significant associations between fellowship program demographics (eg, geographic region, setting, hospital type, and number of fellows per year) and presence of dermatology clinical experience.

This study provides insight into dermatology education in geriatric fellowship programs, highlighting gaps in dermatology education and offering opportunities to strengthen dermatology exposure for geriatrics trainees. Almost half of the responding programs did not offer dermatology experiences in

Table I. Demographic characteristics and dermatology educational opportunities offered by surveyed geriatric fellowship programs

	Value,	National
Program characteristics	N = 55, n (%)	data, %*
Census region		
Northeast	14 (25.5)	31.2
South	19 (34.5)	31.8
Midwest	13 (23.6)	22.1
West	9 (16.4)	14.9
Setting		
Urban	37 (67.3)	
Suburban	13 (23.6)	
Rural	5 (9.1)	
Hospital type		
University-based academic medical center	35 (63.6)	
Community hospital	18 (32.7)	
Veterans Affairs hospital	2 (3.6)	
No. fellows per postgraduate year		
1	10 (18.2)	
2	21 (38.2)	
3	10 (18.2)	
4	6 (10.9)	
5	4 (7.3)	
≥6	4 (7.3)	
Dermatology subspecialty education coordinator		
Yes	3 (5.5)	
Subspecialty education coordinator is a dermatologist	3 (100)	
No	52 (94.5)	
Dermatology clinical experience		
Mandatory clinic rotation that all fellows must complete	5 (9.1)	
Optional clinic rotation	20 (36.4)	
Other experience	10 (18.2)	
No	22 (40.0)	
How clinical experience is offered	, ,	
Longitudinally throughout the year	3 (5.5)	
Discrete block	25 (45.5)	
Not applicable, not offered	27 (49.1)	
Length of dermatology clinical experience	, ,	
<5 half-day clinic sessions	39 (70.9)	
5-10 half-day clinic sessions	9 (16.4)	
11-20 half-day clinic sessions	6 (10.9)	
>20 half-day clinic sessions	1 (1.8)	
Dermatology learning experiences offered	,,	
Formal dermatology didactic lectures	25 (45.5)	
Dermatology procedural skills workshops	2 (3.6)	
Board review	23 (41.8)	
Outpatient dermatology clinic	19 (34.5)	
Inpatient dermatology consultation services	1 (1.8)	
Dermatology faculty discussants at clinical teaching conferences	7 (12.7)	
Other	10 (18.2)	
Site of dermatology residency	. 5 (10.2)	
Yes	33 (60)	
No	22 (40)	

^{*}Data from programs represented in FREIDA, the American Medical Association Residency & Fellowship Database.

Table II. Odds of geriatric fellowship programs offering dermatology educational experiences based on the presence of a dermatology residency program

Presence of dermatology residency program	Dermatology education experience	Odds ratio	95% Confidence interval
Yes	Presence of dermatology clinical experience	1.07	0.36-3.20
Yes	>5 half-day dermatology clinic sessions	4.12	1.01-16.76*
Yes	Presence of a dermatology subspecialty education coordinator	1.10	0.99-1.23
Yes	Formal dermatology didactic lectures	1.36	0.46-4.04
Yes	Dermatology procedural skills workshops	1.36	0.46-4.04
Yes	Board review	0.78	0.26-2.32
Yes	Experiences in outpatient dermatology clinic	2.51	0.75-8.43
Yes	Experiences in inpatient dermatology consultation services	0.96	0.87-1.05
Yes	Dermatology faculty discussants at clinical teaching conferences	1.79	0.31-10.15

^{*}P < .05.

their fellowship programs, and of those that did, only 14% (5/35) had mandatory clinical experiences. Although the presence of a dermatology residency was associated with longer dermatology clinical experiences, geriatrics programs do not need to have an associated dermatology program or subspecialty coordinator to implement dermatology clinical experiences. Our survey's somewhat low response rate might have led to bias, though the respondents reflected the national distribution. Dermatologists should consider increasing their involvement in dermatology education in geriatrics training to augment effective care for skin disease in the growing elderly population.

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Predicting future dermatology academic productivity from medical school publications



To the Editor: Dermatology residency programs use applicants' research productivity as medical students as a metric to approximate academic curiosity. Although surgery residency programs documented an association, internal medicine fellowships and neurosurgery residencies found student research weakly predictive of productivity and academic careers. In dermatology, a recent study identified an association between medical school research and academic careers. The objective of this study was to evaluate whether research output during medical school was predictive of later research productivity in dermatology.

We identified 426 American Board of Dermatology 2013 diplomates. For each, through internet search, we documented medical school and residency program; completion of PhD, another residency, or fellowship; and current employment at academic institutions. Top 25-medical school attendance was coded per 2019 *U.S. News and World Report* rankings.

Each dermatologist's publication record was queried in PubMed before residency (defined before May 2009), during residency (July 2009 to June 2013),