

Cross-sectional Analysis of Matched Dermatology Residency Applicants Without US Home Programs

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PRACTICE POINTS

- Our study suggests that matched dermatology applicants with and without home programs (HPs) had similar achievements, on average, for number of publications and holding advanced degrees.
- Because of the potential benefits of having program connections for matching in dermatology, applicants without HPs should seek dermatology research mentors.

To the Editor:

Dermatology is one of the most competitive residencies for matching, with a 57.5% match rate in 2022.¹ Our prior study of research-mentor relationships among matched dermatology applicants corroborated the importance of home programs (HPs) and program connections.² Therefore, our current objective was to compare profiles of matched dermatology applicants without HPs vs those with HPs.

We searched websites of 139 dermatology programs nationwide and found 1736 matched applicants from 2016 to 2020; of them, 323 did not have HPs. We determined program rank by research output using Doximity Residency Navigator (<https://www.doximity.com/residency/>). Advanced degrees (ADs) of applicants were identified using program websites and LinkedIn. A PubMed search was conducted for number of articles published by each applicant before September 15 of their

match year. For applicants without HPs, we identified the senior author on each publication. The senior author publishing with an applicant most often was considered the research mentor. Two-tailed independent *t* tests and χ^2 tests were used to determine statistical significance ($P < .05$).

On average, matched applicants without HPs matched in lower-ranked (74.4) and smaller (12.4) programs compared with matched applicants with HPs (45.3 [$P < .0001$] and 15.1 [$P < .0001$], respectively) (eTable). The mean number of publications was similar between matched applicants with HPs and without HPs (5.64 and 4.80, respectively; $P = .0525$) as well as the percentage with ADs (14.7% and 11.5%, respectively; $P = .0953$). Overall, 14.8% of matched applicants without HPs matched at their mentors' institutions.

Data were obtained for matched international applicants as a subset of non-HP applicants. Despite attending medical schools without associated HPs in the United States, international applicants matched at similarly ranked (44.3) and sized (15.0) programs, on average, compared with HP applicants. The mean number of publications was higher for international applicants (11.4) vs domestic applicants (5.33). International applicants more often had ADs (23.8%) and 60.1% of them held doctor of philosophy degrees. Overall, 40.5% of international applicants matched at their mentors' institutions.

Our study suggests that matched dermatology applicants with and without HPs had similar achievements, on average, for the number of publications and percentage with ADs. However, non-HP applicants matched at

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The eTable is available in the Appendix online at www.mdedge.com/dermatology.

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lower-ranked programs than HP applicants. Therefore, applicants without HPs should strongly consider cultivating program connections, especially if they desire to match at higher-ranked dermatology programs. To illustrate, the rate of matching at research mentors' institutions was approximately 3-times higher for international applicants than non-HP applicants overall. Despite the disadvantages of applying as international applicants, they were able to match at substantially higher-ranked dermatology programs than non-HP applicants. International applicants may have a longer time investment—the number of years from obtaining their medical degree or US medical license to matching—giving them time to produce quality research and develop meaningful relationships at an institution. Additionally, our prior study of the top 25 dermatology residencies showed that 26.2% of successful applicants matched at their research mentors' institutions, with almost half of this subset matching at their HPs, where their mentors also practiced.² Because of the potential benefits of having program connections, applicants without HPs should seek dermatology research mentors, especially via highly beneficial in-person networking opportunities (eg, away rotations, conferences) that had previously been limited during the COVID-19 pandemic.³ Formal mentorship programs giving priority to students without HPs recently have been developed, which only begins to address the inequities in the dermatology residency application process.⁴

Study limitations include lack of resident information on 15 program websites, missed publications due to applicant name changes, not accounting for abstracts and posters, and inability to collect data on unmatched applicants.

We hope that our study alleviates some concerns that applicants without HPs may have regarding applying for dermatology residency and encourages those with a genuine interest in dermatology to pursue the specialty, provided they find a strong research mentor. Residency programs should be cognizant of the unique challenges that non-HP applicants face for matching.

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3. Association of American Medical Colleges. Specialty recommendations on away rotations for 2021-22 academic year. Accessed May 24, 2023. <https://students-residents.aamc.org/researching-residency-programs-and-building-application-strategy/specialty-response-covid-19>
4. derminterest Instagram page. DIGA is excited for the second year of our mentor-mentee program! Mentors are dermatology residents. Please keep in mind due to the current circumstances, dermatology residency 2021-2022 applicants without home programs will be prioritized as mentees. Please refrain from signing up if you were paired with a faculty mentor for the APD-DIGA Mentorship Program in May 2021. Contact @suryasweetie123 only if you have specific questions, otherwise all information is on our website and the link is here. Link is below and in our bio! #DIGA #derm #mentee #residencyapplication. Accessed May 24, 2023. <https://www.instagram.com/p/CSrq0exMchY/>

APPENDIX

Comparisons of Metrics Among Matched Residency Applicants at US Dermatology Programs (2016-2020)(N=1736)^a

	Matched applicants with home programs (n=1413)	Matched applicants without home programs (n=323)	<i>P</i> value ^b	Matched international applicants (n=42)
Mean (SD) program rank	45.3 (33.5)	74.4 (41.1)	<.0001	44.3 (31.1)
Mean (SD) no. of residents in dermatology program	15.1 (5.89)	12.4 (4.93)	<.0001	15.0 (6.16)
Mean (SD) no. of publications	5.64 (5.29)	4.80 (8.09)	.0525	11.4 (16.2)
Advanced degrees, %	14.7	11.5	.0953	23.8
PhDs, %	6.47	3.72	.0590	14.3
Matched at mentors' institutions, %	NA	14.8	NA	40.5

Abbreviations: NA, not available; PhD, doctor of philosophy.

^aResidents in 120 of 139 programs were identified.

^b $P < .05$ denotes significance on 2-tailed independent *t* test for matched applicants with home programs vs matched applicants without home programs.