

## ORIGINAL RESEARCH

## Perspectives Regarding Virtual Interviewing for Dermatology Residency in the United States: A Survey of Applicants, Residents, Faculty, and Program Directors in the 2022-2023 Application Cycle

Thomas Norman, BA<sup>1</sup>, Jana Guenther, BA<sup>1</sup>, Marie D. Lafeir, MD<sup>2</sup>, Scott Worswick, MD<sup>3</sup>

<sup>1</sup> Keck School of Medicine, University of Southern California, Los Angeles, CA, USA

<sup>2</sup> Department of Dermatology, Rush Medical College, Chicago, IL, USA

<sup>3</sup> Department of Dermatology, University of Southern California, Los Angeles, CA, USA

### ABSTRACT

**Background:** Despite the widespread adoption of virtual interviewing for dermatology residency in the United States (US), there are limited data on the perspectives of those affected.

**Objectives:** Characterize the viewpoints regarding virtual interviewing of applicants, residents, and faculty who participated in the 2022-2023 US dermatology residency application cycle.

**Methods:** Two anonymized surveys were created: one for applicants and the other for programs (residents, program directors, and other faculty). The program survey was distributed through the US Dermatology Program Director listserv in January 2023. The applicant survey was distributed through email in April 2023.

**Results:** There were 336 respondents: 135 applicants, 63 program directors, 77 other faculty, and 61 residents. Overall, the largest proportion favored virtual-only interviewing (39%), followed by some combination of in-person and virtual interviews (28%) and in-person-only interviewing (20%). There was no significant difference between preferences of applicants and program directors ( $P=0.13$ ). The respondents' most supported changes for future application cycles were limiting the number of programs to which an applicant can apply (34%), limiting the number of interviews an applicant can accept (30%), and providing funding for applicants with demonstrated need (13%).

**Limitations:** Our study may be limited by the response rates, estimated to be 21% for applicants and 45% for program directors.

**Conclusion:** Given the range of preferences, we would not advocate for requiring virtual-only interviewing at this time for our specialty. Instead, reforms should prioritize the respondents' most supported changes for future application cycles.

### INTRODUCTION

During the COVID-19 pandemic, virtual interviewing became widely adopted in the United States (US) for residency applicants beginning with the 2020-2021 application

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cycle. While necessary at the time, it is controversial whether virtual interviewing should be continued in a post-pandemic world. Advantages of virtual interviewing include increased convenience, reduced cost, and less environmental impact,<sup>1-5</sup> whereas potential disadvantages include reduced ability to gauge “fit” (both for the applicant and the program),<sup>3-6</sup> “interview hoarding” (extremely competitive applicants amassing the majority of interviews),<sup>6-8</sup> and applicants more commonly matching at their home programs.<sup>9-14</sup> Although virtual interviewing undoubtedly encourages equity from a financial perspective, it may disadvantage applicants who are less traditionally competitive, who have less ability to do research, and those with no home dermatology program.

When determining what type of interview to offer in future application cycles, it is important to reconcile the potential impacts of virtual interviewing with the preferences of those affected. A previous survey of applicants and program directors who participated in the 2020-2021 US dermatology residency application cycle revealed that both groups supported the use of virtual interviews in future application cycles, but this survey did not account for all stakeholders, such as residents and faculty other than program directors.<sup>6</sup> Moreover, perspectives may have changed following the widespread availability of COVID-19 vaccines and reduced emphasis on social distancing. To better inform the practices of post-pandemic application cycles, we surveyed applicants, residents, and faculty who participated in the 2022-2023 US dermatology residency application cycle for their perspectives regarding virtual interviewing.

## METHODS

Two anonymized surveys were created in REDCap (<https://projectredcap.org/>): one for applicants and the other for programs (residents, program directors, and other faculty) (**Supplemental Files 1 and 2**). Survey questions were designed to assess respondent characteristics, preferred interview type, viewpoints regarding virtual interviewing, and the single most important change recommended for future application cycles. Both surveys were distributed once through email and could be completed up to three months following distribution. The program survey was distributed through the US Dermatology Program Director listserv in January 2023, with a request to forward the survey to all dermatology faculty and residents at the institution. The applicant survey was distributed in April 2023, with emails obtained through the Electronic Residency Application Service following Match Day.

Respondents were included if they were at least 18 years of age and participated in the 2022-2023 US dermatology residency application cycle. Completing every survey question was not required, but respondents were excluded if they did not answer our primary outcome: interview preference for future application cycles. Chi-square and Fisher’s exact tests were used to evaluate differences between applicant and program director preferences and to assess the association between applicant characteristics and preference for virtual-only interviews. Median-based categories were used for debt burden and the number of interviews received.  $P < 0.05$  was considered statistically significant. R version 4.2.2 was used.

This study was approved by the University of Southern California's Institutional Review Board (UP-22-01031). The requirement for informed consent was waived because of the study design.

## RESULTS

### Respondent characteristics

Of the 642 applicants sent the survey, 135 responded for an estimated response rate of 21%. Respondents were most commonly 25-29 years of age, White, and female (**Table 1**). Approximately half of the applicants (53%) were less than \$150,000 in debt. Forty-one percent had taken time off during medical school to pursue dermatology-specific research, usually for 12 months. Of the 20 applicants who had graduated from medical school, 11 (55%) had taken time off from residency or other postgraduate work to participate in dermatology-specific research. The majority of applicants attended dermatology away rotations, most commonly two. Almost two-thirds of applicants applied to at least 90 residency programs, but slightly less than one-third of applicants received 10 or more interviews. Most applicants (84%) attended the same number of interviews they received. Of the 19 who attended fewer interviews than they received, the majority (16 [84%]) still attended at least 10 interviews. Virtual interviews were most common, and only 27% of applicants participated in a mixture of in-person and virtual interviews.

Of the 201 program respondents, 63 were program directors, 77 were other faculty, and 61 were residents. The survey was sent to approximately 141 programs, for an estimated program director response rate of

45%. The response rates for residents or faculty could not be determined; it is unknown how many received the survey. The residents included 25 individuals (41%) in their first year of dermatology training, 20 (33%) in their second year, and 16 (26%) in their third year. Program respondents were most commonly 30-39 years of age (83 [41%]) and White (137 [68%]) (**Supplemental Table 1**). All geographic regions were represented; South Atlantic (37 [18%]) was the most common, followed by Pacific (33 [16%]) and New England (31 [15%]). Program respondents were mainly from programs offering only virtual interviews (187 [93%]). Much less frequently, they were from programs offering both in-person and virtual interviews (9 [4%]) or only in-person interviews (5 [2%]).

### Interview preference for future application cycles

Overall, applicant and program respondents most frequently preferred virtual-only interviewing for future application cycles (39%), followed by in-person-only interviewing (20%) and familiarity-based interviewing (i.e., virtual interviews if the applicant was known by the program [e.g., home student, away rotator] but in-person interviews if the applicant was not known) (14%) (**Table 2**). Applicants most commonly preferred virtual-only interviewing (45%), followed by familiarity-based interviewing (14%) and in-person-only interviewing (11%). Program directors also most frequently preferred virtual-only interviewing (40%), but they preferred in-person-only interviewing over familiarity-based interviewing (21% vs. 13%). Interview preferences did not differ significantly between applicants and program directors ( $P = 0.13$ ).

**Table 1.** Characteristics of applicants in the 2022-2023 application cycle (N=135).

| Age, years                      |          | Home dermatology program       |          |
|---------------------------------|----------|--------------------------------|----------|
| 18-24                           | 3 (2)    | Yes                            | 105 (78) |
| 25-29                           | 103 (76) | No                             | 30 (22)  |
| 30-39                           | 29 (21)  | Third-year clerkship grades    |          |
| Race/ethnicity <sup>a</sup>     |          | Combination of P, HP, and H    | 34 (25)  |
| Asian or Pacific Islander       | 32 (23)  | Combination of HP and H (no P) | 53 (39)  |
| Black/African American          | 13 (10)  | All H                          | 23 (17)  |
| Latinx/Chicanx/Mestizx/Hispanic | 9 (7)    | Clerkships graded as only P/F  | 22 (16)  |
| White/European American         | 61 (45)  | NR                             | 3 (2)    |
| Other or mixed                  | 18 (14)  | Time off school for research   |          |
| NR                              | 2 (1)    | Yes                            | 55 (41)  |
| Gender identity <sup>b</sup>    |          | No                             | 79 (59)  |
| Cisgender female                | 105 (78) | NR                             | 1 (1)    |
| Cisgender male                  | 27 (20)  | Away rotations                 |          |
| Gender neutral                  | 1 (1)    | 0                              | 13 (9)   |
| NR                              | 2 (1)    | 1                              | 22 (16)  |
| Debt burden                     |          | 2                              | 45 (33)  |
| < \$50,000                      | 45 (33)  | 3                              | 27 (20)  |
| \$50,000-\$99,999               | 10 (7)   | ≥ 4                            | 26 (19)  |
| \$100,000-\$149,999             | 17 (13)  | NR                             | 2 (1)    |
| \$150,000-\$199,999             | 15 (11)  | Residency programs applied to  |          |
| \$200,000-\$249,999             | 9 (7)    | < 70                           | 17 (13)  |
| \$250,000-\$299,999             | 9 (7)    | 70-79                          | 16 (12)  |
| \$300,000-\$349,999             | 13 (10)  | 80-89                          | 14 (10)  |
| > \$350,000-\$400,000           | 14 (10)  | ≥ 90                           | 87 (64)  |
| NR                              | 3 (2)    | NR                             | 1 (1)    |
| Current geographic location     |          | Interviews received            |          |
| New England                     | 15 (11)  | 0                              | 1 (1)    |
| Middle Atlantic                 | 16 (12)  | 1                              | 3 (2)    |
| South Atlantic                  | 31 (23)  | 2                              | 8 (6)    |
| East North Central              | 21 (16)  | 3                              | 8 (6)    |
| East South Central              | 4 (3)    | 4                              | 13 (10)  |
| West North Central              | 4 (3)    | 5                              | 10 (7)   |
| West South Central              | 15 (11)  | 6                              | 11 (8)   |
| Mountain                        | 7 (5)    | 7                              | 13 (10)  |
| Pacific                         | 20 (15)  | 8                              | 14 (10)  |
| Other                           | 2 (1)    | 9                              | 10 (7)   |
| Geographic location preference  |          | 10-14                          | 28 (21)  |
| Same as current location        | 49 (36)  | ≥ 15                           | 15 (11)  |

|   |          |                            |          |
|---|----------|----------------------------|----------|
| Different from current location         | 36 (27)  | NR                         | 1 (1)    |
| No preference                           | 50 (37)  | Interviews attended        |          |
| Stage of medical training               |          | Same as number received    | 114 (84) |
| 4 <sup>th</sup> year medical student    | 115 (85) | Fewer than number received | 19 (14)  |
| Internal medicine resident <sup>c</sup> | 15 (11)  | NR                         | 2 (1)    |
| Other post-medical school               | 5 (4)    | Type of interview attended |          |
| Medical school attended                 |          | Virtual only               | 99 (73)  |
| US allopathic                           | 119 (88) | Mixed                      | 36 (27)  |
| US osteopathic                          | 10 (7)   | In-person only             | 0 (0)    |
| Foreign medical school                  | 5 (4)    |                            |          |
| NR                                      | 1 (1)    |                            |          |

Data are reported as number (%). <sup>a</sup>No respondent identified as Native American. <sup>b</sup>No respondents identified as transgender male or transgender female. <sup>c</sup>13 were first-year residents, 1 was a second-year resident, and 1 was a third-year resident. Abbreviations: F, fail; H, honors; HP, high pass; NR, not reported; P, pass; US, United States.

Preference for virtual-only interviewing was associated with a few applicant characteristics. Applicants more frequently preferred virtual-only interviews if they received at least 8 interviews ( $P=0.015$ ), participated in only virtual interviews during the application cycle ( $P=0.02$ ), were osteopathic or foreign medical students or graduates ( $P=0.02$ ), or were fourth-year medical students ( $P=0.001$ ) (**Supplemental Table 2**). Factors not significantly associated with preferring virtual-only interviews included age, race, gender, clinical grades, time off medical school for dermatology-specific research, number of away rotations attended, debt burden (at least \$150,000 vs. less than \$150,000), geographic preference for residency (same as current region, different from current region, or no preference), and whether their medical school had a dermatology department.

When asked to rank their rationale for interview preference, both applicant and program respondents who preferred virtual-only interviews selected cost savings for applicants as the most important reason (92 of 126, 73%) and applicant convenience as the second most important reason (87 of 125,

67%). Applicant respondents who preferred in-person-only interviewing ranked ability to best present themselves as the most important reason (12 of 14, 86%), followed by exposure to a program's culture (10 of 12, 83%). Program respondents who preferred in-person-only interviewing selected ability to determine applicant fit (33 of 49, 67%) as most important, followed by ability to best present their program (32 of 49, 65%).

## Viewpoints regarding interviews

Most applicants agreed or strongly agreed that virtual interviews were less stressful and allowed them to attend more interviews than if all interviews had been in person (**Figure 1a**). Only 21% thought they were better able to present themselves by interviewing virtually versus in person. Less than half believed that they were able to obtain an adequate sense of a program's culture or location through virtual interviewing. However, most believed that their rank list would have been unchanged, even if all interviews had been in person.

Most program respondents agreed or strongly agreed that they were able to gauge

**Table 2.** Preference for future interview cycles.

| Preference   | Overall (N=336) | Applicants (n=135) | Program directors (n=63) | Faculty (n=77) | Residents (n=61) |
|--|-----------------|--------------------|--------------------------|----------------|------------------|
| Virtual only   | 130 (39)        | 61 (45)            | 25 (40)                  | 26 (34)        | 18 (30)          |
| In-person only   | 66 (20)         | 15 (11)            | 13 (21)                  | 18 (23)        | 20 (33)          |
| Virtual for known applicants and in-person for unknown applicants <sup>a</sup> | 46 (14)         | 20 (14)            | 8 (13)                   | 11 (14)        | 7 (11)           |
| Virtual screening, followed by in-person interview of select candidates        | 28 (8)          | 15 (11)            | 2 (3)                    | 8 (10)         | 3 (5)            |
| Another combination of in-person and virtual interviews                        | 20 (6)          | 7 (5)              | 2 (3)                    | 8 (10)         | 3 (5)            |
| No preference, as long as it is the same for every applicant                   | 46 (14)         | 17 (13)            | 13 (21)                  | 6 (8)          | 10 (16)          |

Data are reported as number (%). <sup>a</sup>Known applicants” are those who would be familiar to a dermatology department prior to interviews, such as applicants from the institution and those who completed a research year or a clinical rotation with the program.

an applicant’s fit with their program through virtual interviewing and that the residency classes recruited via virtual interviews were comparable to those recruited through in-person interviews (**Figure 1b**). Notably, 25% (43 of 185) believed that the classes recruited through virtual interviewing were different. **Supplemental Figure 1** summarizes the differences indicated by these respondents.

### Single most important change for future application cycles

Overall, the applicant and program respondents thought that the single most important change for future application cycles was limiting the number of programs to which an applicant can apply (34% of respondents). This was followed by limiting the number of

interviews an applicant can accept (30%), providing funding for applicants with demonstrated need (13%), mandating that all programs offer the same type of interview (12%), and limiting the number of away rotations an applicant can attend (4%) (**Table 3**). Program directors were most in favor of limiting the number of programs applied to (62%), whereas applicants were most in favor of limiting the number of interviews accepted (40%).

## DISCUSSION

To our knowledge, this is the first study regarding virtual interviewing for dermatology residency in the United States that accounts for the perspectives of all stakeholders (applicants, residents, program directors, and other faculty). Overall, we found that the largest proportion of respondents preferred virtual-only interviewing for future application cycles. Applicants and program directors most frequently supported this approach, with rates of 45% and 40%, respectively.

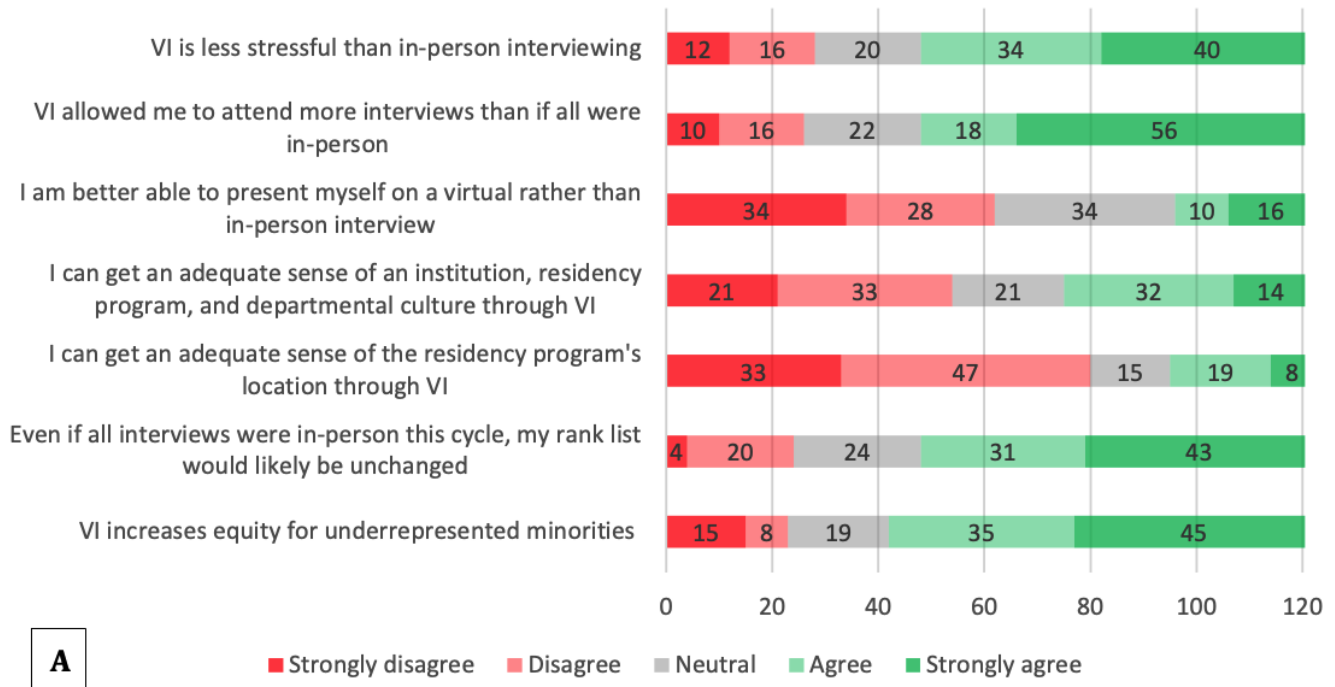
A previous survey of dermatology applicants and program directors evaluated support for virtual interviewing by determining the degree of willingness to continue this type of interviewing.<sup>6</sup> However, this methodology possibly introduced agreement bias and did not account for the many potential interviewing types for future cycles. A major strength of our study was that we assessed whether respondents specifically preferred virtual-only interviewing versus several other options. We observed that the preferences across all respondent groups were variable, with at least some support for all options. The Association of American Medical Colleges recommended that specialties use exclusively virtual interviewing for the 2023-

2024 application cycle.<sup>15</sup> Because of the range of preferences observed in our study, we hesitate to advocate for one uniform interview type at this time for our specialty. Instead, our data support the statement of the Association of Professors of Dermatology, encouraging each program to utilize the interview method that best aligns with their values and recruitment goals.<sup>16</sup>

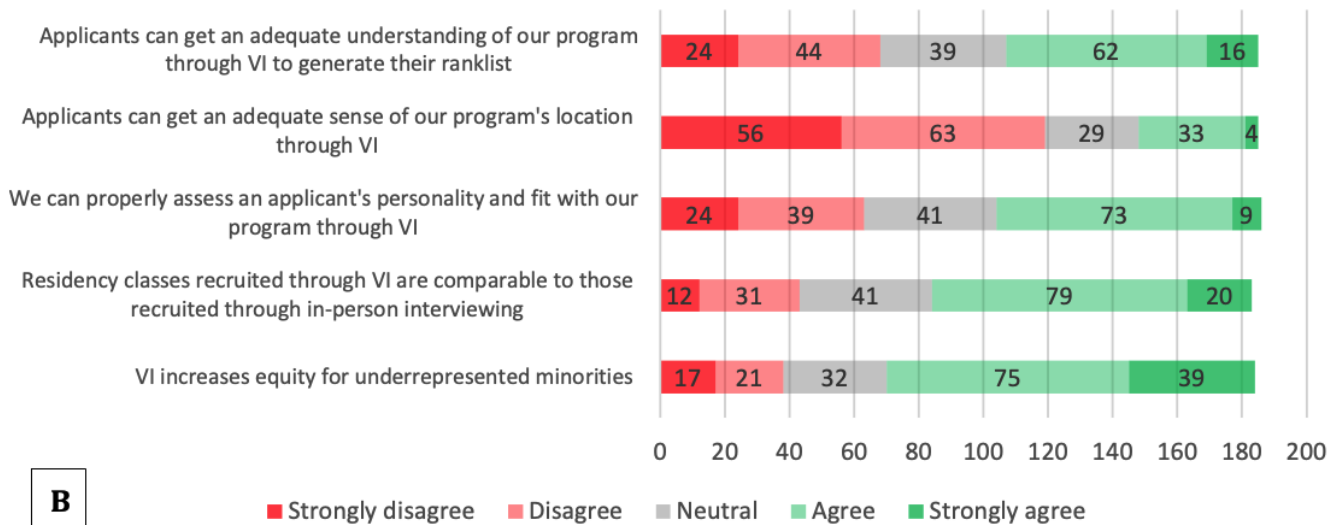
Applicants frequently acknowledged that interviewing virtually may have undermined their ability to gain an adequate sense of a program's location or culture. Unexpectedly, most applicants believed that their rank list would have remained the same, even if all interviewing had been in person. This suggests that factors other than the interview experience (such as geographic location, program reputation, or previous exposure to the department) may have a stronger impact in determining an applicant's rank list. Importantly, most applicants only participated in virtual interviews, potentially limiting their ability to appreciate how in-person interviewing could influence their opinions of programs. Indeed, respondents who participated in a combination of virtual and in-person interviewing (instead of virtual-only interviews) less frequently preferred virtual-only interviews for future cycles.

A lack of in-person exposure to other programs could explain why dermatology applicants have more frequently matched at their home institutions ("internal matching") in recent years, compared to pre-pandemic cycles.<sup>9-14</sup> Interviewing is not the only way to gain exposure to other institutions, and a reduction in away electives has been hypothesized as another contributor to this internal matching trend. Nevertheless, based on data from three consecutive application cycles, the re-introduction of elective

### Applicant viewpoints regarding virtual interviewing



### Program respondent viewpoints regarding virtual interviewing



**Figure 1.** Applicant (A) and program (B) respondent viewpoints regarding virtual interviewing. The program respondents included data from program directors, other faculty, and residents. Abbreviations: VI, virtual interviewing



**Table 3:** Single most important change for future interview cycles.

| Change  | Overall (N=283) | Applicants (n=116) | Program directors (n=56) | Faculty (n=63) | Residents (n=48) |
|---|-----------------|--------------------|--------------------------|----------------|------------------|
| Limiting the number of programs an applicant can apply to     | 97 (34)         | 28 (24)            | 35 (62)                  | 19 (30)        | 15 (31)          |
| Limiting the number of interviews an applicant can accept     | 83 (30)         | 46 (40)            | 5 (9)                    | 17 (27)        | 15 (31)          |
| Providing funding for applicants with demonstrated need       | 38 (13)         | 19 (16)            | 4 (7)                    | 8 (13)         | 7 (15)           |
| Mandating that all programs offer the same type of interview  | 35 (12)         | 13 (11)            | 5 (9)                    | 10 (16)        | 7 (15)           |
| Limiting the number of away rotations an applicant can attend | 10 (4)          | 5 (4)              | 1 (2)                    | 2 (3)          | 2 (4)            |
| Other   | 10 (4)          | 5 (4)              | 3 (5)                    | 2 (3)          | 0 (0)            |
| No changes necessary  | 10 (4)          | 0 (0)              | 3 (5)                    | 5 (8)          | 2 (4)            |

Data are reported as number (%).

rotations at non-home institutions as the COVID-19 pandemic subsided has reduced the rate of internal matching in dermatology but not to pre-virtual interviewing levels.<sup>9-11</sup> Since the introduction of virtual interviewing, 58% of program directors have received fewer interview declines or cancellations.<sup>6</sup> Applicants are likely motivated to attend most (or all) interviews received to optimize their likelihood of matching,<sup>17</sup> an approach facilitated by the decreased financial and logistic burden of virtual interviews.

Consequently, virtual interviewing may be most beneficial for highly competitive applicants and may explain why applicants receiving at least 8 interviews were more likely to favor virtual-only interviewing. In contrast, this option may be less popular among less traditionally competitive applicants. As respondents generally

believed that they perform better in person, applicants receiving fewer interviews may be more likely to value the opportunity to optimize the interviews they do receive by attending the interviews in person. Applicants with fewer interviews may also be apprehensive about increased interview hoarding with virtual interviewing, a concern spontaneously mentioned by several respondents. Interview hoarding may not only undermine a less competitive applicant's ability to obtain interviews but also reduce a program's ability to effectively recruit

candidates. One respondent commented that they knew a highly qualified applicant who accepted interviews at programs they were not interested in simply to practice their interviewing skills.

The two changes with the most support for future application cycles were limiting the number of programs an applicant can apply to and limiting the number of interviews an applicant can accept. Importantly, both interventions may lead to a more equitable distribution of interviews. The practice of program preference signaling recently adopted in dermatology could have similar effects, promoting a more comprehensive and thorough review of applicants who have demonstrated sincere interest in each program.<sup>16</sup>

Dermatology is a medical specialty with low racial and ethnic diversity.<sup>18</sup> Financial equity associated with virtual interviewing may increase accessibility of the field to applicants underrepresented in medicine, who are more commonly from financially disadvantaged backgrounds.<sup>19</sup> Concordant with this belief, 63% of our survey respondents agreed that virtual interviewing increases equity for underrepresented minorities. Surprisingly, almost 20% of respondents disagreed or strongly disagreed, possibly reflecting barriers and/or disadvantages of virtual interviewing faced by underrepresented groups. It has been suggested that virtual platforms may increase implicit bias, as interviewers' decisions are more likely to be influenced by physical appearance and interview space/home background.<sup>20</sup>

An analysis of the 2020-2021 cycle demonstrated that Black and Latinx applicants had particularly favorable match outcomes.<sup>19</sup> The reduced financial obstacles of virtual interviewing may have contributed to these findings, although the study authors suggested that these results may also reflect the increase in diversity initiatives in recent years.<sup>19,21,22</sup> In the current study, neither race/ethnicity nor debt burden was

associated with preferring virtual-only interviews, indicating that other applicant characteristics might have a stronger influence on interview preference. Further research specifically exploring the effects of virtual interviewing on groups underrepresented in medicine is warranted. In addition to previously discussed limitations, our study is limited by possible response bias. The estimated response rates were 21% and 44% for applicants and program directors, respectively, and could not be determined for residents and other faculty. Still, the data likely represents our target populations, given that the applicant characteristics and the geographic distribution of program directors in this study are comparable to those in a previous nationwide survey with a higher response rate.<sup>6</sup>

## CONCLUSION

In a survey of applicants, residents, program directors, and faculty in the 2022-2023 US dermatology residency application cycle, the largest proportion of respondents favored virtual-only interviewing for future cycles. However, there was considerable support for a combination of in-person and virtual interviews and in-person-only interviewing, suggesting that restricting all interviews to a virtual format may not be appropriate at this time. Instead, efforts should be focused on addressing the changes most supported by respondents, such as reducing the number of applications and interviews.

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**Corresponding Author:**  
Thomas Norman, BA

1975 Zonal Avenue, Los Angeles, CA 90025  
 Phone: 323-442-0084  
 Email: [tenorman@usc.edu](mailto:tenorman@usc.edu)

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**Supplemental Table 1:** Characteristics of program directors, faculty, and residents.

| Characteristic                  | Overall (N=201) | Program directors (n=63) | Faculty (n=77) | Residents (n=61) |
|---------------------------------|-----------------|--------------------------|----------------|------------------|
| Age, years                      |                 |                          |                |                  |
| 25-29                           | 24 (12)         | 0 (0)                    | 0 (0)          | 24 (39)          |
| 30-39                           | 83 (41)         | 23 (37)                  | 24 (31)        | 35 (57)          |
| 40-49                           | 46 (23)         | 25 (40)                  | 20 (26)        | 2 (3)            |
| 50-59                           | 25 (12)         | 7 (11)                   | 18 (23)        | 0 (0)            |
| ≥ 60                            | 21 (10)         | 8 (13)                   | 13 (17)        | 0 (0)            |
| NR                              | 2 (1)           | 0 (0)                    | 2 (3)          | 0 (0)            |
| Race/ethnicity                  |                 |                          |                |                  |
| Asian or Pacific Islander       | 29 (14)         | 8 (13)                   | 11 (14)        | 10 (16)          |
| Black/African American          | 7 (3)           | 0 (0)                    | 1 (1)          | 6 (10)           |
| Latinx/Chicanx/Mestizx/Hispanic | 10 (5)          | 2 (3)                    | 1 (1)          | 7 (11)           |
| Native American                 | 2 (1)           | 0 (0)                    | 0 (0)          | 2 (3)            |
| White/European American         | 137 (68)        | 50 (79)                  | 55 (71)        | 32 (52)          |
| Mixed or other                  | 14 (7)          | 2 (3)                    | 8 (10)         | 4 (6)            |
| NR                              | 2 (1)           | 1 (2)                    | 1 (1)          | 0 (0)            |
| Gender identity <sup>a</sup>    |                 |                          |                |                  |
| Cisgender female                | 115 (57)        | 36 (57)                  | 43 (56)        | 36 (59)          |
| Cisgender male                  | 79 (39)         | 25 (40)                  | 31 (40)        | 23 (38)          |
| Other                           | 3 (1)           | 0 (0)                    | 2 (3)          | 1 (2)            |
| NR                              | 4 (2)           | 2 (3)                    | 1 (1)          | 1 (2)            |
| Medical school                  |                 |                          |                |                  |
| US allopathic                   | 183 (91)        | 61 (97)                  | 69 (90)        | 53 (87)          |
| US osteopathic                  | 2 (1)           | 1 (2)                    | 0 (0)          | 1 (2)            |
| Foreign medical school          | 12 (6)          | 1 (2)                    | 6 (8)          | 5 (8)            |
| NR                              | 4 (2)           | 0 (0)                    | 2 (3)          | 2 (3)            |
| Geographic location             |                 |                          |                |                  |
| New England                     | 31 (15)         | 5 (8)                    | 14 (18)        | 12 (20)          |
| Middle Atlantic                 | 30 (15)         | 10 (16)                  | 12 (16)        | 7 (11)           |
| South Atlantic                  | 37 (18)         | 12 (19)                  | 14 (18)        | 12 (20)          |
| East North Central              | 18 (9)          | 9 (14)                   | 5 (6)          | 4 (7)            |
| East South Central              | 4 (2)           | 3 (5)                    | 1 (1)          | 0 (0)            |

|  |          |         |         |         |
|--|----------|---------|---------|---------|
| West North Central                     | 25 (12)  | 6 (10)  | 6 (8)   | 13 (21) |
| West South Central                     | 16 (8)   | 9 (14)  | 1 (1)   | 6 (10)  |
| Mountain                               | 5 (2)    | 2 (3)   | 3 (4)   | 0 (0)   |
| Pacific                                | 33 (16)  | 7 (11)  | 19 (25) | 7 (11)  |
| Other                                  | 2 (1)    | 0 (0)   | 2 (3)   | 0 (0)   |
| Time in practice post-residency, years |          |         |         |         |
| 0-2                                    | -        | 2 (3)   | 8 (10)  | -       |
| 3-7                                    | -        | 20 (32) | 16 (21) | -       |
| 8-16                                   | -        | 25 (40) | 23 (30) | -       |
| 17-30                                  | -        | 10 (16) | 18 (23) | -       |
| ≥ 31                                   | -        | 5 (8)   | 12 (16) | -       |
| NR                                     | -        | 1 (2)   | 0 (0)   | -       |
| Interview type offered                 |          |         |         |         |
| In-person only                         | 5 (2)    | 3 (5)   | 2 (3)   | 0 (0)   |
| Virtual only                           | 187 (93) | 57 (90) | 67 (87) | 58 (95) |
| Mixed                                  | 9 (4)    | 3 (5)   | 3 (4)   | 3 (5)   |

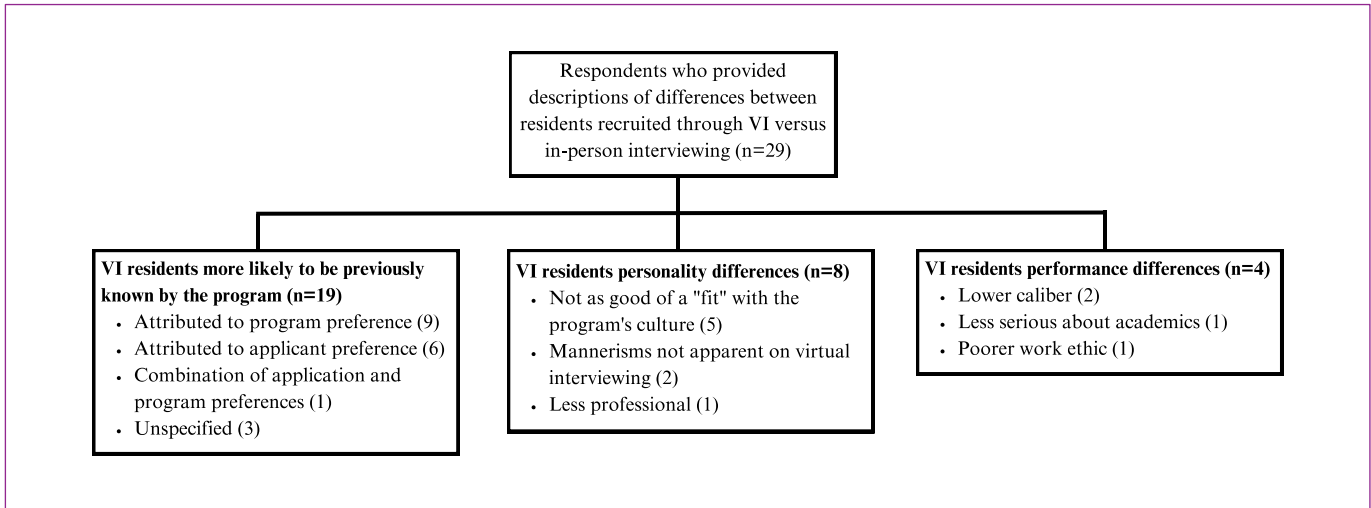
Data are reported as number (%). <sup>a</sup>No respondent identified as gender neutral, transgender male, or transgender female. Abbreviations: NR, not reported; US, United States.

**Supplemental Table 2:** Applicant characteristics according to interview preference for future application cycles.

| Factor                               | Overall (N=135) | Prefer virtual-only interviews (n=61) | Prefer not virtual-only interviews (n=74) | P-value <sup>a</sup> |
|--------------------------------------|-----------------|---------------------------------------|---|----------------------|
| Type of medical school               |                 |                                       |   | 0.02                 |
| US allopathic                        | 119 (88)        | 59 (97)                               | 60 (81)                                   |                      |
| US osteopathic                       | 10 (7)          | 1 (2)                                 | 9 (12)                                    |                      |
| Foreign medical school               | 5 (4)           | 1 (2)                                 | 4 (5)                                     |                      |
| Stage of medical training            |                 |                                       |   | 0.001                |
| 4 <sup>th</sup> year medical student | 115 (85)        | 59 (97)                               | 56 (76)                                   |                      |
| Other <sup>b</sup>                   | 20 (15)         | 2 (3)                                 | 18 (24)                                   |                      |
| Interviews received                  |                 |                                       |   | 0.015                |
| < 8                                  | 67 (50)         | 23 (38)                               | 44 (59)                                   |                      |
| ≥ 8                                  | 67 (50)         | 38 (62)                               | 29 (39)                                   |                      |
| Interviews participated in           |                 |                                       |   | 0.02                 |

|                             |         |         |         |  |
|-----------------------------|---------|---------|---------|--|
| Virtual only                | 99 (73) | 51 (84) | 48 (65) |  |
| Mixed (virtual + in-person) | 36 (27) | 10 (16) | 26 (35) |  |

Data are number (%). Only statistically significant factors are shown. <sup>a</sup>Fisher's exact test was used for type of medical school, and chi-square test was used for other comparisons. <sup>b</sup>Includes 15 internal medicine residents and the 5 respondents who identified as "other." Abbreviation: US, United States.



**Supplemental Figure 1:** Explanations of differences in residency classes recruited through virtual interviewing, compared to classes previously recruited through in-person interviewing. Explanations were obtained from 29 of the 43 respondents who disagreed or strongly disagreed that residents recruited through virtual interviews were the same as those recruited through in-person interviews. These explanations were provided by 10 program directors, 7 other faculty, and 12 residents. If a respondent indicated multiple differences, all differences were included and categorized. Abbreviations: VI, virtual interviewing.