

## ORIGINAL RESEARCH

## Navigating the Transition: The Impact of Step/Level 1 Pass/Fail Grading on Dermatology Residency Match Outcomes

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## ABSTRACT

**Background:** Competitive residencies like dermatology are becoming increasingly difficult to match into. The transition to pass/fail (P/F) grading for USMLE Step 1 and COMLEX Level 1 aimed to reduce stress by shifting focus away from numerical scores.

**Objective:** This study evaluates the impact of the P/F transition on dermatology residency applications.

**Methods:** National Resident Matching Program (NRMP) charting outcomes and program director surveys were analyzed from 2018, 2020, 2022, and 2024. This data was compiled and analyzed in December of 2024.

**Results:** Findings revealed increased dermatology applicants without a corresponding rise in available positions, intensifying competition. Research productivity increased significantly, with more abstracts, presentations, and publications following the P/F change, indicating a shift in application strategies. In 2024, the first cohort affected by the P/F system displayed stable USMLE Step 2 scores. Program directors increasingly prioritized holistic factors, such as interpersonal skills, letters of recommendation, and faculty interactions.

**Conclusion:** These trends suggest that applicants are compensating for the loss of Step 1/Level 1 numerical scoring by strengthening other aspects of their applications, particularly research. Understanding evolving selection criteria is crucial to preparing medical students for successful matches. Further research is needed to assess the long-term impacts of the P/F transition.

## INTRODUCTION

The R.O.A.D. to happiness is often used to describe radiology, ophthalmology, anesthesiology, and dermatology residencies. These specialties are associated with work-life balance, greater job satisfaction, and higher compensation.<sup>1</sup> Dermatology is a sought-after specialty among medical students, resulting in a high

volume of applicants for minimal positions. Over time, it has become increasingly difficult to match into dermatology.<sup>2</sup> Residency programs must evaluate hundreds of applications, relying on quantifiable factors to assess competitiveness. Standardized metrics like board scores have traditionally served as benchmarks due to their uniformity across applicants.<sup>3</sup>

In 2022, USMLE Step 1 and COMLEX Level 1 transitioned from numeric scoring to pass/fail (P/F) designation.<sup>4</sup> The change aimed to preserve medical student well-being.<sup>3,4</sup> Nonetheless, this shift sparked debates regarding its impact on residency applications. This report explores this impact on dermatology residency match success.

## METHODS

Dermatology residency match charting outcomes from the National Resident Matching Program (NRMP) was analyzed for 2018, 2020, 2022, and 2024, focusing on trends in match outcomes and exam performance for osteopathic (DO) and allopathic (MD) students. Data was extracted from publicly available NRMP match results, including total applicants, match rates, average exam scores, research productivity, and volunteer experiences.<sup>5-12</sup> Program director preferences and selection criteria for DO applicants were obtained from the NRMP's Program Director Surveys for 2022 and 2024.<sup>13,14</sup> Data was analyzed to identify trends related to the P/F transition and evolving program director preferences. Data analysis was completed in 2024. This study did not qualify for Institutional Review Board approval.

## RESULTS

### Match Outcomes

In 2018, the dermatology residency match process offered 472 positions, with 651 total applicants (1.38 applicants per position). Twelve of 31 DO applicants matched (38.7%), while 368 of 451 MD applicants matched (81.6%). By 2020, the applicant pool increased, with 538 positions offered and 692 applicants (1.29 applicants per

position). DO matches rose to 41 of 58 applicants (70.7%), while MDs matched 388 of 458 (84.7%). In 2022, 544 positions were offered with 834 applicants (1.53 applicants per position). DO matches decreased to 38 of 76 (50%), while MDs matched 426 of 595 (71.6%). In 2024, 576 positions were available for 916 applicants (1.59 applicants per position). DO matches were 40 of 85 (47%), and MD matches remained at 424 of 601 (70.5%). (**Table 1**)

### Exam Scores

In 2018, the mean Step 1 scores for matched DO and MD applicants were 237 and 249, respectively, while Step 2 scores were 254 and 256. In 2020, matched DO and MD applicants scored 245 and 248 on Step 1, with Step 2 scores of 253 and 256. In 2022, the mean Step 1 score for matched DO and MD applicants was 240 and 248, with Step 2 scores of 256 and 257. For 2024, Step 1 scores were P/F. Step 2 scores for DOs declined to 250, while MDs maintained 257 (**Table 1**).

### Research, Publications, and Volunteer Experiences

In 2018, DO applicants averaged 2.9 research experiences and MDs averaged 5.2. Abstracts, presentations, and publications averaged 9.0 for DOs and 14.7 for MDs. In 2020, DO applicants averaged 4.7 experiences compared to 5.8 for MDs with abstracts, presentations, and publications at 7.3 for DOs and 19 for MDs. Productivity increased in 2022, with DOs averaging 4.3 experiences and 9.8 abstracts, presentations, and publications, while MDs averaged 7.2 and 20.9. By 2024, DO applicants reported 4.5 research experiences and 15.4 abstracts, presentations, and publications, while MDs averaged 6.4 and 27.7 (**Table 1**).

**Table 1.** Dermatology Match Data for DO and MD Applicants (2018–2024).

Category	2018 DO (matched/ unmatched)	2018 MD (matched/ unmatched)	2020 DO (matched/ unmatched)	2020 MD (matched/ unmatched)	2022 DO (matched/ unmatched)	2022 MD (matched/ unmatched)	2024 DO (matched/ unmatched)	2024 MD (matched/ unmatched)
Number of Dermatology Positions Offered	472		538		544		576	
Total Number of Dermatology Applicants	651		692		834		916	
Number of Applicants per Position	1.38		1.29		1.53		1.59	
Number Matched/ Unmatched	12/19	368/83	41/17	388/70	38/38	426/169	40/45	424/177
Percent Matched/Unmatched	38.7/61.3	81.6/18.4	70.7/29.3	84.7/15.3	50/50	71.6/28.4	47.1/52.9	70.5/29.5
Mean COMLEX Level 1 Score	614/621	-	651/586	-	626/619	-	555/548	-
Mean COMLEX Level 2 Score	686/638	-	675/603	-	681/638	-	612/556	-
Mean COMLEX Level 1 Score Percentile	86/87	-	91/75	-	86/85	-	P/F	-
Mean COMLEX Level 2 Score Percentile	89/79	-	88/67	-	89/80	-	81/62	-
Mean USMLE Step 1 Score	237/239	249/241	245/238	248/239	240/240	248/244	222/243	245/235
Mean USMLE Step 2 Score	254/247	256/249	253/240	256/248	256/247	257/251	250/246	257/250
Mean Research Experiences	2.9/2.7	5.2/4.8	4.7/2.7	5.8/4.9	4.3/4.7	7.2/6.1	4.5/5.4	6.4/4.9
Mean Number of Abstracts, presentations and publications	9.0/8.9	14.7/8.6	7.3/4.6	19/10.8	9.8/9	20.9/15.7	15.4/11.8	27.7/19.0
Mean number of Volunteer Experiences	3.7/4.5	9.1/7.5	7.5/7.1	9.4/8.8	9.8/7.4	11/9.3	6/4.3	5.3/5.6

Percentage who have a Ph.D. degree	0/0	6.2/4.2	0/0	10.2/8.5	0/0	6/5	0/3.4	9.8/1.7
Percentage who have another graduate degree	0/21.4	16.4/18.3	14.3/18.2	19.7/24.6	32.4/29.6	15.9/20.3	33.8/38.7	17.1/17.2

Volunteer experiences rose from 2018 to 2022, with DOs increasing from 3.7 to 9.8, and MDs from 9.1 to 11. However, experiences declined in 2024, with DOs averaging 6 and MDs 5.3. (**Table 1**)

## Program Director Preferences

In 2022, program directors ranked personal attributes (95%), interpersonal skills (86%), and personal experiences (100%) as the most important criteria in identifying applicants to interview. Step 1 scores were essential, with 50% of programs preferring target scores and 44% requiring only a pass for DO applicants. For Step 2, 61% preferred a target score. COMLEX scores were less prioritized, with 53% and 61% of programs not considering Level 1 and Level 2 (**Table 2**).

By 2024, letters of recommendation in the specialty (100%), prior knowledge of the applicant (91%), and interactions with faculty during interviews (82%) gained importance. A new requirement for a Step 1 Pass replaced the previous numerical score preferences. Step 2 scores remained critical, with 60% of programs preferring target scores for DO applicants (**Table 2**).

## DISCUSSION

The transition to P/F for Step 1 and Level 1 marks a significant change in residency selection. Our analysis identified several trends across applicant metrics, focusing on matched candidates to provide insights into this transition's impact.

## Match Outcomes

From 2018 to 2024, dermatology applicants increased, with DO applicants growing 2.7-fold and MD applicants 1.3-fold. Available positions grew by only 1.2%, raising competition. DO match rates improved, likely due to a unified accreditation system. Even so, there continues to be a lack of DO candidates matching historically MD positions. A study revealed only 0.4% of these spots were filled by DOs from 2017 to 2019, compared to 27.6% of former American Osteopathic Association (AOA) positions filled by MDs.<sup>15</sup>

## Exam Scores

Although 2024 marked the first match cycle with P/F for Step 1 and Level 1, candidates with numerical scores were still included due to gap years or reapplicants. We hypothesize the reduction in scores for DO candidates is due to reapplicants with lower scores being included.

The average Step 2 scores remained stable above 250 for both MD and DO matched applicants, indicating programs increasingly rely on Step 2 performance without a numerical Step 1 score. The decline in matched Level 2 scores for DO applicants suggests that Step 2 scores are a more critical factor.

## Research, Publications, and Volunteer Experiences

Research productivity has steadily increased, reflecting a shift toward strengthening

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applications post-P/F implementation (**Table 1**). The averages remain higher for matched MD applicants, attributed to the greater access to research funding and resources at MD schools.<sup>16</sup> On the other hand, volunteer experiences declined, likely due to ERAS limitations and COVID-19 restrictions during medical school.

### Program Director Preferences

The program directors' surveys from 2022 and 2024 reveal a deprioritization of standardized test scores. After the transition to P/F, Step 2 preferences remained consistent, while programs increasingly ignored COMLEX scores, correlating with the

decrease in COMLEX scores in 2024 NRMP data.

Survey results indicate a shift towards a holistic evaluation. In 2024, the survey was refined to include further criteria (**Table 2**). The preference for Step 2 scoring and qualitative factors like personal attributes suggests a broader review.

A limitation of this study is that program director participation in surveys decreased from 29 in 2022 to 11 in 2024, potentially restricting insights. Future research is needed to understand the evolving selection criteria following the P/F transition.

**Table 2.** Program Director Survey Results for Dermatology Residency Applicants in 2022 (n=29) and 2024 (n=11).

Category	2022 (%)	2024 (%)	Mean Importance (1–5)
<b>USMLE/COMLEX Usage (DO Applicants)</b>			
<b>USMLE Step 1</b>			
Not Considered	0	0	-
Pass Only	44	100	-
Prefer Target Score	50	0	-
Require Target Score	6	0	-
<b>COMLEX Level 1</b>			
Not Considered	53	80	-
Pass Only	24	20	-
Prefer Target Score	18	0	-
Require Target Score	6	0	-
<b>USMLE Step 2</b>			
Not Considered	11	0	-
Pass Only	22	20	-
Prefer Target Score	61	60	-
Require Target Score	6	20	-
<b>COMLEX Level 2</b>			
Not Considered	61	80	-
Pass Only	22	0	-
Prefer Target Score	11	0	-
Require Target Score	6	20	-
<b>USMLE Step 3</b>			
Not Considered	56	100	-
Pass Only	11	0	-
Prefer Target Score	28	0	-
Require Target Score	6	0	-

COMLEX Level 3			
Not Considered	61	100	-
Pass Only	17	0	-
Prefer Target Score	17	0	-
Require Target Score	6	0	-
2022 Applicant Traits Considered for Selection			
Personal Attributes	95	-	4.5
Interests	86	-	4.2
Interpersonal Skills, Ethics, Professionalism	86	-	4.6
Personal Experiences	100	-	4.4
Geographic Preferences	67	-	3.6
2022 Holistic Review Drivers			
Increase Resident Diversity	90	-	-
Identify Promising Applicants	86	-	-
Improve Program Alignment	71	-	-
Support Institution Mission	67	-	-
2024 Applicant Interview Selection Criteria			
Letters of rec in the specialty	-	100	4.4
Personal prior knowledge of applicant	-	91	4.5
MSPE/Dean's Letter	-	82	4.2
Grades in required clerkships	-	82	3.7
Class rank/quartile	-	73	3.9
Grades in clerkship in desired specialty	-	64	4
AOA membership	-	64	3.6
GHHS Membership	-	55	3.5
Consistency in grades	-	55	4.2
Awards/special honors in clerkship in desired specialty	-	55	3.8
Audition elective/rotation within your department	-	55	4.3
Away rotation in your specialty	-	45	3.8
Awards/special honors in clerkships	-	45	3.6
Awards/special honors in basic sciences	-	45	3.4
Evidence of continuous medical education w/out gaps	-	36	2.8
Visa status	-	27	3.3
Graduate of highly-regarded medical or osteopathic school	-	27	3
Ability to work legally in the U.S	-	27	3.3
Applicant flagged with Match violation	-	27	5
Accreditation status of applicant medical school	-	18	4.5
Sigma Sigma Phi membership	-	9	3
2024 Applicant Rank Selection Criteria			
Interactions with faculty during interview/visit	-	82	4.9
Interpersonal skills	-	73	4.8
Interactions with house staff during interview/visit	-	73	4.3
Feedback from current residents	-	64	4.7
MSPE/Dean's Letter	-	55	4.5
Class ranking/quartile	-	36	4



Grades in required clerkships	-	27	4.3
Graduate of highly-regarded medical or osteopathic school	-	18	3.5
GHHS Membership	-	18	3
Applicant facility with meeting platform	-	18	4.5
AOA Membership	-	18	3
Other post-interview contact	-	9	4
Grades in clerkship in desired specialty	-	9	4
Consistency in grades	-	9	4
Awards/special honors in clinical clerkships	-	9	4
Awards/special honors in clerkship in desired specialty	-	9	4
Awards/special honors in basic sciences	-	9	4
Accreditation status of applicant's medical school	-	9	4
Sigma Sigma Phi Membership	-	0	0
Evidence of continuous medical education without gaps	-	0	0

## CONCLUSION

These findings have valuable implications for applicants seeking to match into dermatology residencies. The analysis demonstrates increasing competitiveness with greater emphasis on research productivity and evolving program director preferences. Step 2 remains critical, highlighting the continued importance of standardized metrics. These findings underscore the evolving landscape of dermatology residency applications and the need for monitoring to ensure equitable opportunities and optimize candidate evaluation strategies.

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