

A Novel Screening Method for Plastic Surgery Applications: Towards Increased Equity in the Application Process

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Background

- Electronic Residency Application Service (ERAS) is the current application portal used to apply to residency
- Many programs have historically use screening methods (i.e., USMLE Step 1 score) to decrease the burden of reviewing applications
 - However, current screening methods can seem biased and caused undue stress to applicants
- Conscientious and thorough application assessment promotes residency program diversity

Objective

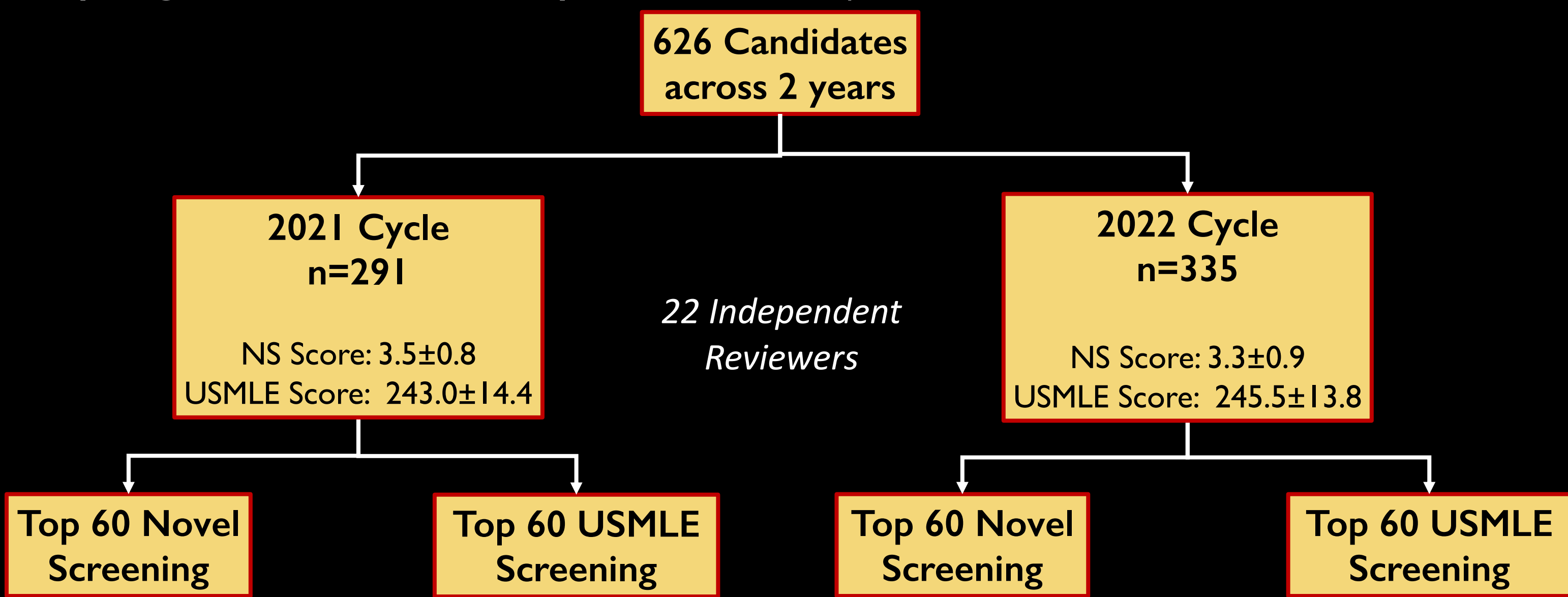
- To create a novel screening system and compare it head-to-head with a USMLE Step 1 score filter
- To develop a screening process that was more equitable and encompassing by implementing a novel application review process

Methods

- Review of applications from candidates in the 2021 and 2022 cycle
- Each ERAS application divided at random and evaluated by separate interviewers
- Top 60 applications based on screening method were compared because the top 60 applications are read by the program director

Methods (cont.)

- Novel screening (NS) method entailed removal of USMLE Step 1 scores, photographic deidentification, and evaluation by four independent reviewers.
- The residency program director held a training session for all reviewers on the NS method to standardize the review process.
- Each reviewer scored applications on a 5-point Likert scale with regards to our institution's six core values (i.e., communication skills, leadership, intellectual curiosity, compatibility with the program, service, and perseverance)



	2021 Cycle			2022 Cycle		
	Top 60 by NS Method	Top 60 by USMLE Screening	p-value	Top 60 by NS Method	Top 60 by USMLE Screening	p-value
Gender			0.028*			0.034*
Male	27 (45.0%)	39 (65.0%)		36 (43.3%)	38 (63.3%)	
Female	33 (55.0%)	21 (35.0%)		34 (56.7%)	22 (36.7%)	
Medical School Degree			0.297			0.074
Allopathic (MD)	58 (96.7%)	54 (90%)		55 (91.7%)	60 (100%)	
Osteopathic (DO)	0 (0%)	1 (1.7%)		1 (1.7%)	0 (0%)	
IMG MD	2 (3.3%)	5 (8.3%)		4 (6.7%)	0 (0%)	
Medical School Region			0.622			0.053
West	10 (16.7%)	6 (10%)		9 (15%)	1 (1.7%)	
South	16 (26.7%)	19 (31.7%)		18 (30%)	24 (40%)	
Northeast	21 (35%)	17 (28.3%)		17 (28.3%)	21 (35%)	
Midwest	11 (18.3%)	13 (21.7%)		12 (20%)	14 (23.3%)	

Results

- In total, 626 applications reviewed by 22 faculty across 2 application cycles
 - Overall, mean USMLE Step 1 score: 242.3±14.1 and mean NS score: 3.4±0.9
- Average NS score was significantly higher in the top 60 applications by our NS method compared to the top 60 applications by USMLE Step 1 screening for both cycles
 - 2021: 4.6±0.3 vs. 3.9±0.7; p<0.001
 - 2022: 4.6±0.3 vs. 3.8±0.8; p<0.001
- Similarly, the average USMLE Step 1 score was significantly lower in the top 60 applications by NS compared to the top 60 applications by USMLE screening for both cycles
 - 2021: 250.0±12.0 vs. 260.3±3.8; p<0.001
 - 2022: 249.7±12.5 vs. 262.2±3.9; p<0.001
- For both cycles, there was a significantly higher proportion of females identified in the top 60 applications by NS compared to USMLE Step 1 screening (2021: 55.0% vs. 35.0%; p=0.028, 2022: 56.7% vs. 36.7%; p=0.034)
- Across both cycles, 41.7% of the top 60 applications by NS were represented in the top 60 applications by USMLE Screening

Conclusion

- A comprehensive screening method may select higher-quality applications than using a test score cutoff
- There were significant differences in NS scores, USMLE Step 1 scores, and gender between the screening methods
- This suggests that our NS method may result in a less biased approach to identifying higher-quality applications for plastic surgery residency
- For the 2023 application cycle, our program will be using the NS method because it appears to be more equitable in recognizing higher-quality applications for plastic surgery residency