



The Increasing Role of Research in Matching into Plastic Surgery Residency

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Citation: Eliseo S, Miles M, Wojcik R (2024) The Increasing Role of Research in Matching into Plastic Surgery Residency. J Surg 9: 11001 DOI: 10.29011/2575-9760.11001

Received Date: 16 February 2024; **Accepted Date:** 20 February 2024; **Published Date:** 22 February 2024

Plastic surgery remains the most competitive specialty to match into with a match rate of 62.3% as compared to 99.1% for all specialties in 2023 [1]. Up until the 2023 match, high United States Medical Licensing Examination (USMLE) Step 1 scores were one of the most important objective factors attributing to a successful match. As USMLE Step 1 has recently transitioned to a pass/fail scoring system applicants are advised to find opportunities to make them more competitive to attain one of the coveted 207 spots. Plastic surgery applicants already tend to be some of the highest scoring of all residency applicants in terms of medical school didactic grades and board scores, and these high-achieving students also tend to be active in their extra-curriculars and members of prestigious medical organizations, like AOA and Global Humanism. However, these factors are not standardized among all medical schools, leaving some students with superfluous achievements and others with only a few of the unsaid “prerequisites”. In addition to the USMLE Step 1 score shift, there have been other changes to the match to attempt to attenuate the disparities among applicants, such as the transition to virtual interviews, the introduction of the much more economically conscious Plastic Surgery Common Application, and standardized letters of recommendation [2]. With these changes, there has been a mass shift towards research to fill in any gaps. Over the last 10 years, the number of abstracts, presentations, and publications of matched plastic surgery applicants has grown exponentially, with the average from 2022 being 28.4 research items per applicant [1,2]. With the increase in research items, there has been a shift towards extracurricular research experiences or fellowships that are offered by some institutions for the student to complete for 1-2 years during their medical training. There are several reasons why this can be considered great news for the field of plastic surgery.

An increased number of research experiences per applicant shows strong interest and commitment, and such background will prepare the future resident for any research required within the program [3]. Principles of plastic surgery are not taught as part of most medical school curricula unlike other specialties, such as obstetrics, cardiology, pediatrics, etc., so research experiences can also serve as an introduction to the field of plastic surgery prior to starting residency. Therefore, an applicant with more research on their resume can have a less steep learning curve as compared to the applicant without research. However, multiple issues arise with the push towards more research. One of the biggest issues is that this requires a solidified interest in the field of plastic surgery very early on in medical school in order to build a competitive repertoire. This can be very difficult for a medical student to navigate, especially if they do not have substantial clinical experience prior to starting medical school. While some larger institutions with home plastic surgery programs may offer opportunities for their students to get involved in research early on, there are several institutions without home programs or programs nearby, making it so that students who become interested in the field during their second, or even third, year rely on outsourcing their research or completing a research fellowship.

Research fellowships are also few and far between. Until 2024, there was no central database to find research fellowships, although the Children’s Hospital Of Pennsylvania (CHOP) is currently creating one. Many such programs are obtained through personal connections, job postings from various plastic surgery organization websites, and emailing. The current list of opportunities created by CHOP has just over 15 programs with each only accepting 1-2 students. These programs are open not only to medical students, but also to international medical

graduates and surgical residents who all desire the same residency spot, making the research fellowship programs competitive in and of themselves. Like residency applications, some require a Step 1 passing score, letters of recommendation and/or letters of good standing from the medical institution, in order to apply. Medical schools also have distinctive ways in handling research years—plenty of schools may accommodate the time away from the standard medical curricula to allow advancement in research, while others require the student to take a leave of absence, thus forcing some students to support themselves as their financial aid is paused and their student loans begin to accumulate interest. Only few of the available research fellowship programs provide living stipends, making them highly inaccessible to applicants with socioeconomic disparities and deterring them from applying. This can be especially deterring for applicants who have a lower match rate—like DO applicants or those without a home program—even if it is crucial in their acceptance [4-6].

While there is an obvious increase in research productivity among plastic surgery residency applicants in recent years, it seems that some programs are already working on improving the inherent barriers mentioned. There are increasing educational opportunities for medical and pre-medical students who show an interest in plastic surgery. Current programs, like “Prepped” Sub-Internship Preparatory Program, the American Society of Plastic Surgeons Roadmaps Program, and the Plastic Surgery Diversity, Equity, and Inclusion Mentorship Program, aim to address the aforementioned disparities and improve equity for those who are interested in

this field [7]. Regarding research fellowships, few have started to offer remote opportunities to reduce the financial burden. These are certainly some steps in the right direction, and hopefully ones that will result in improved equitability and representation of applicants to otherwise wouldn’t have the chance.

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