

Applying for Residency: Plastic Surgery

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Part I: Overview of Plastic Surgery

Description of Specialty, Common condition, types of patients
From the AAMC Careers in Medicine Website: “A plastic surgeon deals with the repair, reconstruction, or replacement of physical defects of form or function involving the skin, musculoskeletal system, craniomaxillofacial structures, hand, extremities, breast and trunk, and external genitalia or cosmetic enhancement of these areas of the body. Cosmetic surgery is an essential component of plastic surgery. The plastic surgeon uses cosmetic surgical principles to both improve overall appearances and to optimize the outcome of reconstructive procedures as well.

Special knowledge and skill in the design and surgery of grafts, flaps, and free tissue transfer and replantation is necessary. Competence in the management of complex wounds, the use of implantable materials, and in tumor surgery is required. Plastic surgeons have been prominent in the development of innovative techniques such as microvascular and craniomaxillofacial surgery, liposuction, and tissue transfer. Anatomy, physiology, pathology, and other basic sciences are fundamental to the specialty. Competency in plastic surgery implies an amalgam of basic medical and surgical knowledge, operative judgment, technical expertise, ethical behavior, and interpersonal skills to achieve problem resolution and patient satisfaction. Plastic surgeons also need to hone their ability to think in three dimensions, as well as have good aesthetic sense, creativity, and appreciation for detail. Subspecialty certifications include craniofacial surgery and surgery of the hand.”

Career trajectories: academics, clinical, research, teaching, etc.
Plastic surgeons practice in all settings, including large academic centers, where cancer and trauma reconstructive procedures are the most common, to individual private practice, where cosmetic procedures make up the majority of procedures performed. Between those two extremes, there may be any combination. A common model is the plastic surgeon who has privileges at a large academic center where they practice reconstructive surgery part time and fill their remaining time in the private practice setting, doing cosmetic surgery. Plastic surgeons can be employed by Health Maintenance Organizations (ex. Kaiser Permanente), hospitals and the military. Careers can include clinical work, research, teaching or any combination of these.
Practice Models
See previous section!

Residency: Length, typical curriculum
There are two tracks for entry into plastic surgery:
- Integrated Plastic Surgery: 6 years +/- Fellowship (1 year)
- Independent Plastic Surgery: 5 years of general surgery (+/- 2 years of research) + 3 years of plastic surgery +/- Fellowship (1 year)

Many programs are eliminating the independent programs in favor of integrated programs. It is becoming more difficult to find an independent plastic surgery program after completing a surgical residency in a different specialty.

Fellowships offered after residency
- Hand Surgery
- Microsurgery
- Craniofacial Surgery
- Pediatric Plastic Surgery
- Aesthetic (Cosmetic) Surgery

Part II: Life as a Plastic Surgery

Demographics
In 2017, there were 1,052 female and 5,561 males practicing plastic surgeons in the United States. The number of women in the specialty has nearly doubled since 2006, when there were only 694 practicing female plastic surgeons and 5,408 males.

Earnings Potential
In academic medicine, the median compensation for plastic surgeons are $355,000 at the assistant professor level and $496,000 at the associate/full professor level. In private practice, the numbers can swing both much lower and much higher depending on where the physician is practicing and the percentage of cosmetic surgery in their practice.

Lifestyle
A plastic surgeon’s lifestyle varies incredibly based on where they are practicing, the types of cases they are doing and how often they take call. Per the AAMC website, the average plastic surgeon works 52 hours a week. This time is divided between operating in both inpatient and outpatient settings as well as seeing patients in the clinic. Plastic surgeons may take call for only their patients. They can also cover hospital ER’s for lacerations, craniofacial trauma, wounds, hand trauma and other reconstructive issues. The amount of call and the number of cases seen when on call varies tremendously depending on the setting (urban academic center vs smaller community hospital). Often those with subspecialty training
are employed in larger academic or hospital settings with higher acuity patients, resulting in potentially longer working hours. Cosmetic surgery practices are more flexible and can often be tailored to how busy the surgeon wishes to be.

**Academic Medicine**
Many plastic surgeons work in academic centers, where in addition to their busy clinic practice, may be involved with basic or clinical research, residency or fellowship training, medical student education and hospital administration.

**Part III: Applying in Plastic Surgery**

**How Competitive is Plastic Surgery?**
Integrated plastic surgery is one of the most competitive specialties. The average USMLE score for Step 1 is 248 and Step 2 CK is 252. There are 69 programs with 152 positions. In 2016, there were 216 applications and only 151 matched into an available spot. Of the available positions, 99.3% were filled.

**Planning the post-clerkship and senior years**
Most medical students applying in plastic surgery have performed some sort of research during medical school. Thus, the earlier you decide on plastic surgery as your specialty, the sooner you should reach out to clinicians within the field to identify research opportunities. The plastic surgery elective course directors at each hospital can be helpful in identifying potential career and research mentors. The division chiefs at each hospital can also be great resources, but keep in mind they can be extremely busy, so prior to meeting with them, you should be prepared to discuss your interest in plastic surgery and the type of guidance you are looking for (research or clinical opportunities).

**Clinical Rotations**

**Sub-Internships**
Students should complete at least 2 plastic surgery sub-internships. These can be done at one of the HMS-affiliated hospitals (Brigham and Women’s, Massachusetts General, Boston Children’s, or Beth Israel). Doing your first Sub-I at the hospital where you completed your PCE will allow you to focus on plastic surgery versus trying to learn the ropes of a new hospital. At the start of each Sub-I, you should meet with the course director to establish goals for the month. Most Sub-I rotations will require a presentation at the end of the month. This is an opportunity to showcase yourself and what you have learned while on rotation to the faculty. You should also plan to meet with the Division Chief during your rotation. As they are busy, work with their office to set up a meeting as soon as possible. Identify one or two faculty who you would feel comfortable asking for a letter of recommendation and make sure to work with them often. The residents on service can help you identify the right attendings to work with. Understand residents have a huge influence on the faculty perception of medical students, so work hard to impress them as well.
Away electives
Away electives are controversial as they can lessen your chances for matching if you do not perform well. However, plastic surgery is an incredibly competitive field, and the top applicants have good letters from their away rotations as well as their home institutions. Applicants who can impress people both at home and away are usually the most sought after. Seek the guidance of your mentors as to whether an away rotation would be appropriate for you. No more than one is necessary, though many applicants will perform 2 or 3. If you have a specific location or program you want to match at, an away rotation is recommended to increase your chances.

Other Recommended Electives
Most applicants will also have performed a surgical sub-internship, but this is not required.

Research
Almost all applicants have some sort of research project or paper completed by the time they apply. In fact, many applicants chose to take a whole year for research prior to applying. This is not mandatory, especially if you are a strong applicant with some research completed during medical school. However, if you are concerned about the strength of your application, a research year can be a good way to bolster your application. This should again be discussed with your faculty mentors.

National Meetings
If you have papers or presentations accepted at a national meeting, you should definitely attend. They are great for networking and meeting other medical students, residents and faculty within the field. The American Society of Plastic Surgeons has their national meeting every September. Other important meetings include the American Society of Reconstructive Microsurgeons Meeting in January and the American Association of Plastic Surgeons Meeting in April.

Other degrees
Having another degree, such as an MPH or MBA, can make you a more competitive applicant if you can coherently explain the way you see utilizing the degree within the field.

Part IV: Assessing your Competitiveness

What Criteria do Programs Consider?
Given the competitiveness of plastic surgery, essentially all facets of a student’s application are considered. Your mentors should be able to guide you on the competitiveness of your application. If you have an area you are concerned is weak, your mentor can help you find ways to strengthen other parts. A poor USMLE score or minimal research does not mean your chances of matching are nil, but you will need to strengthen another part of your application in compensation. Some programs do have cut offs for research and USMLE scores, but this is not universal.
1. Grades and your DSA
Although all grades are considered, grades on your plastic surgery sub-internships, as well as your surgical sub-internship, are arguably the most important. However, most applicants to plastic surgery have excellent grades across the board. Within the HMS system, most applicants will have Honors with Distinction for their plastic surgery and general surgery rotations.

2. USMLE Step Scores
The average USMLE score for students who match into Integrated Plastic surgery for Step 1 is 248 and Step 2 CK is 252. Some programs do have score cutoffs, but these are not universal. Step 1 is the most important, though a high Step 2 score can compensate for a less than stellar Step 1 score. Although on average, Step scores are high for applicants matching into plastic surgery, if you have exceptional research or other experiences, these can also compensate for lower Step scores.

3. Research Experience
Some sort of research experience is expected of all students applying in plastic surgery. A year of research is certainly not mandatory and not expected. It can, however, bolster an application that otherwise might be less competitive. According to NRMP data from 2016, students who matched into plastic surgery were involved with 4.5 research experiences on average.

4. Publications
According to NRMP data from 2016, students who matched into plastic surgery had an average of 15.3 abstracts, presentations and publications. If you list a project, abstract, presentation or publication on your application, you should be able to discuss the research in detail.

5. Extracurricular Activities
Although extracurricular activities will certainly be considered, the ones which have the most impact are the ones where the students had a leadership role or made a significant contribution. The sheer number is less important.

Getting an Interview: Attributes Residency PD’s Consider in Granting Interviews
Program directors consider USMLE scores, letters of recommendation and research as the three most important factors in your application. Plastic surgery is a small field where most faculty in academic medicine know each other. For this reason, letters of recommendation play a key role. Grades, honors and extracurricular activities are also considered.

Letters of recommendation
You will need three letters of recommendation for your plastic surgery residency application. Ideally your letter writers will know you and your application well and will be strong advocates for you. A faculty member with a national reputation is a potential great letter writer, but this
person should also know you well and be willing to write you a strong letter. A generic letter from even a nationally recognized person, is not as valuable as a really strong, personal letter from someone less well known. The plastic surgery community is small, so ask the residents as well as your mentors, for guidance on potential good letter writers. If you have done significant research with a faculty member, that person will also be a good choice for a letter writer. A letter from a surgeon not within plastic surgery can be used, but is not as valuable given the small plastic surgery community. Make sure to give your letter writers plenty of notice. Scheduling a meeting with them is a great way to start. Ask them if they would be willing to write you a “strong letter of recommendation.” You should also give them a copy of your CV and be ready to discuss your career goals and why you are interested in plastic surgery.

How many programs should you apply to?
According to the NRMP 2016 data, the average number of programs an applicant applied to was 65. Essentially, most applicants applied to all available programs. Additionally, they applied to an average of 15.9 programs in other specialties (i.e., general surgery as a backup). The AAMC has calculated the “point of diminishing return” based on Step 1 scores in each specialty. For applicants with Step 1 scores greater than 250, 30 programs was the point of diminishing returns. In other words, with a score greater than 250, applying to more than 30 programs does not increase the chances of matching. For applicants with scores between 234 and 249, the number was 29. For applicants with a score less than 233, this number could not be calculated given the low number of applicants with scores less than 233 who successfully matched into plastic surgery. Applying to a mix of highly selective and less selective programs is usually a good place to start, though differentiating the highly selective programs from the less selective can be difficult within the field, given that all programs are relatively competitive. Other important factors to consider are location, size of program, program curriculum and faculty.

Common questions you may be asked – specialty specific:
● Why have you chosen plastic surgery?
● What areas in plastic surgery interest you most and why (ex. Pediatric, craniofacial, microsurgery, etc)?
● Are you interested in reconstructive or cosmetic surgery?
● What are your research interests within plastic surgery?
● What type of practice setting do you see yourself in?
● How will you use your additional degree (ex. MPH, MBA) within plastic surgery?
● Why are you interested in this program specifically?
● Do you have any questions about our program? (A recent applicant commented “I would always have one question specific to the program ready as it shows you have researched the program and have true interest.”)
● Tell me about yourself (A recent applicant commented “I was asked this by every interviewer at every program.”)
● What is the biggest research problem facing plastic surgery?
● If I gave you unlimited resources, what research question would you endeavor to answer?
Communication with Programs

NRMP Code of Conduct for Applicants and Programs:
After the interview, there is no communication allowed between the applicant and programs. Thank you notes/emails are not permitted. Second looks are also not permitted. Your chance to make the best impression is on interview day. If you have a program you feel strongly about, it is possible to have your letter writer, or another strong faculty advocate, call your first-choice program to let them know. However, this is unlikely to change the program’s rank list.

Advocating for Interviews
If you have not received an interview at a specific program, reaching out to your faculty mentors and having them contact the program is worth a try. However, if you have not been granted an interview, it may mean you have not met specific cut offs and your chances for matching, even if granted an interview, are low.