Chapter 12
Preparing to Apply and Choosing a Specialty

Karole T. Collier and Rachel R. Kelz

Abstract This chapter will provide key information on the match process and outline basic information on surgical specialties. The following sections include tips for the successful assessment of one's competitiveness as a surgical residency candidate, and offer a guide to a successful surgical residency match for applicants early in their medical career.

12.1 Introduction

Surgeons often define themselves by the type of surgery that they perform. Each specialty has its own personality. The scope of practice will often define the type of patients treated, research interests, societies of membership, and the bulk of one's professional activities. For that reason, choosing a residency program remains inextricably linked to your personal passions and daily motivations. You need to pick a specialty that suits your personality and style. Find a place where you belong and you feel at home.

To become successful in the surgical residency match, you must be able to say more than just, "I want to be a surgeon". You will need to explain your motivations beyond simply becoming a surgeon. You need to be able to articulate, "why surgery?" Your answer should include information on the specific surgical field of your choice or plans to help you identify a specialty during residency. You should focus on your journey to surgery and reveal specific moments in time that led to your decision to become a surgeon. Your story should include more than just clinical facts. Build from your entire history, weave the facts together, and permit people to appreciate the appropriateness of your decision to pursue surgical training.

The match process can be intimidating. Hopefully, you have managed yourself well during medical school, and as such, your candidacy for the right program will be excellent. However, not everyone has a perfect record. In fact, most students do not, so don't freak out if you are in the middle of the pack. Enter the match with

K.T. Collier • R.R. Kelz (✉)
University of Pennsylvania, Philadelphia, PA, USA
e-mail: Karole.Collier@uphs.upenn.edu; Rachel.Kelz@uphs.upenn.edu

M.J. Englesbe, M.O. Meyers (eds.), *A How To Guide For Medical Students*,
Success in Academic Surgery, DOI 10.1007/978-3-319-42897-0_12

realistic expectations. Listen carefully when you meet with your advisors, and take note of what they tell you about your competitiveness. Factor this information into the types and number of programs to which you apply.

While many points of data go into evaluation of a student applying to surgery residency program, common metrics include United States Medical Licensing Exam (USMLE) Step 1 and 2 scores, 3rd year clerkship grades (particularly surgery), Alpha Omega Alpha (AOA) status and strength of letters of recommendation. Many programs additionally take into account whether a student has been involved in research. Being involved early in your medical school career with mentors in surgery can help you develop both research productivity, and relationships with people who can provide you with a strong letter of recommendation. For many medical students, an easy way to evaluate the competitiveness of their application is to assess their record and accomplishments. One way to organize this is listed in Table 12.1. The acronym P.A.P.E.R.S is a useful tool in organizing your strengths and weaknesses. Think honestly about your past performance overall (P), academic record (A), passion(s) for work (P), extracurricular activities (E), research accomplishments (R) and special circumstances (S). The PAPERS acronym addresses some of the concrete attributes that programs seek in a stellar applicant. It will help you catalogue your career to this point and journal it in the Electronic Residency Application System (ERAS) for review by the residency programs.

You will need to set aside some dedicated time in your 2nd and/or 3rd year of medical school to manage the application process. This means planning your elective schedule so that you can get letters of recommendations from people in your chosen field. This is also time to make sure you are happy with your choice of specialties. You should be organized and ask for letters early in the process as your mentors and faculty are busy and they will not be able to make deadlines if you do not give them advanced warning. All the while work on your application. Gather the information required, write your personal statement and start to investigate programs online. If you choose surgery late in the game, it just means that you will have to accelerate the pace of these activities.

12.2 Surgical Specialties

The surgical specialty that you choose may influence your candidacy. Some specialties are more competitive than others in part just because of supply and demand in the field and the number of residency spots. Any of these specialties can lead to a career in academic surgery and may combine aspects of surgical practice, research and teaching. For the student who is reading this early in their medical career, a brief review of the major fields of general surgery, as well as surgical specialties, is provided for your information.

Table 12.1 The Acronym PAPERS designed to catalogue your accolades

Past performance overall (P)	Childhood background
	Complete college record
	Nontraditional activities prior to medical school
	Awards, scholarships, travel
	Post-baccalaureate performance
Academic record (A)	Medical school grades/rank[a]
	USMLE Step 1 Score[a]
	USMLE Step 2 Score
	Step 2 CK performance
	AOA
	Honor societies
	Awards
Passion(s) for work (P)	What drives you?
	What have you accomplished in the domain that you love best?
	What tangible proof do you have that you can perform well when you are really motivated?
Extracurricular activities (E)	Include everything that you will be willing to discuss in an interview (clubs, community service, sports, culinary activities, work outside of medical student responsibilities, travel including global health experiences etc.)
	Summarize each activity succinctly without losing the ability to communicate its meaning
	Make sure your summary communicates what you have done to someone who is not familiar with the activities
	Highlight leadership positions
Research accomplishments (R)	Include duration of your commitment to each setting
	Abstracts, papers, presentations
	Awards, honors, grants
	Authorship position
	Role in projects (make sure this is confirmed or supported by a letter of recommendation by your PI)
Special circumstances (S)	Exceptional accomplishments
	Blemishes to your record
	Specific challenges that affected your performance
	Any gaps that you have on your transcripts (time away from school)

Note: Do **not** include anything in your application that you are not willing to discuss at an interview. **Do** seek the counsel of your mentors on how to approach areas of weakness or special circumstances that you need to or opt to address in your application

[a]Performance here will be vital to securing interviews

12.2.1 General Surgery

General surgery offers a surgeon the opportunity of broad based training. It covers the essential practice of surgery, and is a required residency before pursuing additional training for many surgical subspecialties (It should be noted that an increasing number of surgical subspecialties now have integrated tracts, where training is matched into directly out of medical school; integrated training residencies are further addressed below, and in more detail in Chap. 12). Specialties requiring general surgery training prior to fellowship include, pediatric surgery, surgical oncology, endocrine surgery, colorectal surgery, minimally invasive surgery and hepatobiliary surgery among others. General surgeons are trained to manage and treat a wide spectrum of diseases across the entire body. A general surgeon has specialized knowledge about the: (1) the alimentary tract; (2) the abdomen & its contents; (3) breast, skin, and soft tissue; (4) head/neck, endocrine, congenital, and oncologic disorders; (5) the peripheral vasculature; (6) the endocrine system; (7) surgical oncology; (8) comprehensive management for trauma; and (9) complete care of critically ill patients with emergent surgical needs. General surgeons pride themselves on their broad surgical knowledge, the variety of procedures that they are able to perform, and their ability to address complex multi-system surgical issues. General surgeons have the opportunity to remain broad in their practice after training, may opt to narrow their scope of expertise with additional fellowship training, or may choose to focus on a specialty after their transition to practice.

General surgery training encompasses 5 years of clinical residency education within an accredited program. To become board certified in general surgery, the program must be accredited by specific organizations and The American Board of Surgery currently requires that a minimum of 750 operative procedures are completed, with 150 to be completed in the chief-resident year, although these requirements change often.[1] Many programs will require 1–2 years of research, which may take place after the 2nd post graduate year (PGY2) or third (PGY3) year and do not count towards the clinical training obligation.

Due to the broad training, diverse knowledge base, and multiple opportunities for further subspecialization, general surgery remains a cornerstone of the health system, with many residency positions (currently ~1,240 annually) offered in the National Resident Match Program.

12.2.2 Surgical Subspecialties

The following surgical specialties were traditionally subspecialties of general surgery and required completion of general surgery residency before continuing training in these areas. They now all offer ‘integrated’ positions where students match into the specialty directly from medical school in addition to the ‘independent’ tracks where training is entered after completion of general surgery residency. The

[1] http://www.absurgery.org/default.jsp?certgsqe_training

pros and cons of the different pathways are addressed in Chap. 12. For all of the integrated positions, students apply to programs just as they would for general surgery through ERAS and they are in the main residency match.

12.2.3 Plastic Surgery

According to the American Board of Plastic Surgery, a plastic surgeon deals with the "repair, reconstruction, or replacement of physical defects of form and function involving the skin and musculoskeletal systems". Plastic surgeons are able to address deformities and trauma related to craniomaxillofacial structures, hand, extremities, breast and trunk, external genitalia, and/or offer cosmetic enhancement to these areas of the body." Plastic surgeons have treatment expertise for a wide breadth of conditions and have considerable career flexibility. Plastic surgeons may choose to continue to further subspecialize in some of the following: craniomaxillofacial surgery, microvascular surgery, hand surgery, and cosmetic surgery. Outside of its broad and challenging technical demands, plastic surgeons have considerable flexibility in their choice of professional lifestyle, academic or professional practice, and research opportunities. As such, the field and practice of plastic surgery remains one of the constant innovators in surgery, and highlights the unique and exciting attributes of the profession.[2]

There are two different training pathways in plastic surgery: (1) an independent surgery program, which requires 3 years of training after the prerequisite general surgery requirement; and (2) the integrated program, that combines the prerequisite general surgery requirement and the training during the program's 6 year duration. Most commonly, an independent surgery program is entered into after completion of general surgery residency, although additional pathways include completion of training in other specialties such as: otolaryngology, neurosurgery, and oral-maxillofacial surgery.

Plastic surgery is a highly competitive surgical specialty. Traditionally, students applying for integrated position have been encouraged to apply to both general surgical training programs as well as plastic surgery programs due to the relatively small number of spots available. This is becoming less practical as general surgery has become more competitive in recent years, but it is still a strategy to consider.

12.2.4 Vascular Surgery

Vascular surgery is focused on the management and treatment of diseases of the vascular system. This includes surgical and non-surgical management of patients with these conditions. This specialty combines both open surgery and endovascular

[2] https://www.facs.org/education/resources/residency-search/specialties/plastic

treatment of vascular conditions. As such, training involves not only surgery but mastery of skills that include non-invasive vascular testing such as duplex ultrasonography, diagnostic angiography and therapeutic endovascular therapies. The evolution of this specialty combines many skill sets and offers the opportunity for a diverse practice. There are also multiple research opportunities in vascular surgery that include not only traditional translational science focused on vascular physiology, but diverse fields such as device development and testing. The independent pathway involves 2 years of training after completion of general surgery residency and most residents apply during their 4th year of residency. Integrated programs are 5 years in length and as noted are entered directly from medical school.

12.2.5 Cardiothoracic Surgery

Cardiothoracic surgery involves the care of diseases of the heart and chest (including the lungs, esophagus and mediastinum). Like other specialties, this has evolved from just open surgical management to include minimally invasive techniques for both cardiac and non-cardiac conditions. Most recently, there has been significant development in the fields of minimally invasive cardiac surgery that combines endovascular/interventional techniques with those of open surgery, and cardiac surgeons have led much of this effort. This has led to an expansion of the practice of cardiothoracic surgery and even greater opportunities for cardiac surgeons. As noted for other programs, the traditional, or independent, pathway to training involves completion of general surgery residency followed by 2 or 3 years (program dependent) of specialty training. The integrated programs for cardiothoracic surgery are 6 years in length and are matched into to out of medical school.

12.2.6 Surgical Specialties

The following surgical specialties are entered into directly from medical school. Historically, many trainees in these specialties completed 1 or 2 years of general surgical training as part of their program, but this has become less common. Urology and neurosurgery are ‘early’ programs in that the application process, and their respective applications move on a different timeline than the main residency match. These programs also participate in the the “San Francisco” match, which is separate from the National Residency Match Program.[3] Although this match functions similarly to the NRMP, it is completely separate from the main residency match.

[3] https://www.sfmatch.org/

12.2.7 Urologic Surgery

Urologic surgery or Urology is focused on the clinical diagnosis, medical and surgical management, prevention, and treatment of urologic diseases, neoplasms, deformities, disorders and injuries. Specialists in this discipline demonstrate knowledge and skill in the medical sciences relevant to the male genitourinary tract, the female urinary tract, and the adrenal glands. Urologists investigate infertility and male sexual dysfunction, as well as well as manage patients with structural and functional disorders of the kidney, ureter, bladder, prostate, urethra and male genitalia.

Urology residency programs match outside of the NRMP and participate in the American Urological Association (AUA Match). Urology residencies are considered one of the "early match" programs, which means that the application process is usually completed in late January, or about 6 weeks prior to the NRMP. Urology is regularly regarded as one of the most competitive surgical subspecialties, and thus applicants must excel in all domains of the ERAS application, along with strong letters of support. Sub-Internship is highly encouraged or required. Training requires 5 years of postgraduate education.

12.2.8 Neurological Surgery

Neurological surgery (often referred to as neurosurgery) manages disorders of the central and autonomic nervous systems, including their supporting systems and vascular supply. Neurosurgeons manage a wide variety of disorders affecting the brain, the spinal cord, spinal column, peripheral nerves, and extra-cranial cerebrovascular systems.

Neurosurgery residencies are usually between 6 and 8 years, including the intern year. The sequence of training usually follows the pattern: 1 year of internships; 1–2 years as a junior resident; 1 year as a mid-level resident; 1–2 years of protected research time or sub-specialty of your choosing, and finally 1 year as a chief resident.

All approved neurosurgical programs participate in the Neurosurgery Match Program. Neurosurgery participates in the "early match", and thus senior applicants are often encouraged to apply to both general surgical training programs as well as neurosurgery programs due to the minimal spots available. This is less common today as most applicants are not interested in both specialties. Preliminary years and substantial research experience are encouraged.

12.2.9 Orthopaedic Surgery

Orthopaedic surgery involves surgery of the musculoskeletal system. The scope of this specialty incorporates surgical and nonsurgical methodologies to prevent, investigate, diagnose, and treat disorders and injuries of the muscular and skeletal systems.

Orthopaedic surgery requires 5 years of graduate medical education and offers graduates a wide variety of subspecialties after residency completion including spine surgery, hand surgery, sports medicine, total joint replacement, pediatric orthopaedics, foot and ankle, and orthopedic oncology. This residency is noted for being highly competitive.

12.2.10 Otolaryngology: Head and Neck Surgery

Often referred to as an Ear, Nose and Throat (ENT) specialist, otolaryngologist-head and neck surgeon provides care for patients with conditions affecting the ears and upper aero-digestive systems that are related to the head and neck. This is a very diverse specialty that involves both surgical and non-surgical management of these conditions. Surgical care spans a broad spectrum including smaller office-based procedures to major cancer resections of the head and neck. This practice allows for a wide variety of practice settings with some otolaryngologists choosing to have a primarily office-based practice. In addition to general residency training, this specialty has a number of subspecialties and many trainees will choose to complete a fellowship for more focused training. Otolaryngology is highly competitive specialty that encompasses 5 years of clinical training. Most students successfully pursuing this specialty will have an excellent academic record.

12.3 What Programs Should I Apply To?

First, make sure that you want to become as surgeon. Review your motivations. Make sure that you have the field correctly assigned, as some procedures, and even surgical fields, are not considered surgical matches, ie. Gastroenterology, gynecological surgery or interventional radiology. The ability to perform procedures is not what defines a surgeon. It is imperative that you begin your journey in surgery very aware of the distinction between surgery and other specialties that have some procedural overlap, as the demands of the specialties are very different beginning with your 1st day of residency.

Once you decide upon your specialty, the process is similar to other academic applications that you have completed. A checklist can be used as a guide to help stimulate your thoughts on the decision to become a surgeon and your candidacy

- ☐ Know yourself – Are you really a surgeon?
- ☐ Strong qualifications
  - ○ History of excellence including pre-medical school experiences
  - ○ Grades
  - ○ Boards
  - ○ Evaluations
  - ○ Letters of recommendation
    - ▪ From your specific field of interest
      - ▪ People who know you well
      - ▪ People who think highly of you
      - ▪ People who are highly regarded in the field
      - ▪ People who have witnessed or supervised your clinical work
      - ▪ Your chairman
- ☐ Commitment to the surgical field of your choice e.g. general surgery
  - ○ Rotations
  - ○ Related extracurricular activities
  - ○ Research
  - ○ Clubs
  - ○ Travel
- ☐ Leadership potential
  - ○ Research
  - ○ Clubs
  - ○ Travel
- ☐ Demonstrate a clear understanding of the required commitment
- ☐ Practice interviews with a mentor
- ☐ Devise a strategy to honestly address any gaps or inconsistencies in your application
- ☐ Enjoy the process, It is a Match!

Fig. 12.1 Checklist for a successful match into surgery – "Know your brand – Know your story"

(Fig. 12.1). It is helpful to map out your motivations and reasons for pursuing a particular area of surgery in addition to learning about the competitiveness of your candidacy prior to considering programs.

Ultimately, you must decide on the type of surgery that interests you in order to be competitive. Remember, surgery is just surgery to nonsurgeons; but to surgeons, the world of surgery is vast and wide. The type of operation, the level of intervention, and the patient population you serve are just a few of the major differences between surgical subspecialties. Personality types and attitudes and behaviors differ across people interested in different types of surgery and you want to be sure that you can demonstrate that you belong. Moreover, this is a big decision for you and it is important that you find a field in which you belong!

By now, hopefully you have a clear idea of how important the choice of residency will be for your medical career. The following questions outline a few things you may want to consider in your decision-making process:

1. What do I find most rewarding about surgery?
2. Will my choices within surgery allow me to utilize the skills that best suit me?
3. Will my choice incorporate the things that I find exciting about medicine and surgery?

4. What will my life look like during and after training? How much time will I devote to my career? Are there other personal life goals I have to consider?
5. Does financial opportunity and debt load impact my career choices?
6. What region of the country should I consider?
7. Do I want a big program or a smaller program? Urban or rural?
8. Am I interested in research? Quality improvement? Business of health care?

These questions should help you to narrow down the list of programs that you consider. Confide in mentors, your family, and friends about any reservations that you have. Make sure that your decisions are compatible with your best version of yourself. Be informed. Residency is a deeply personal decision, and no one will fault you for making the best decision for yourself. In fact, the reason the process is a "match", is to encourage a win-win for the applicant and the program, in that order!

Once you are certain of your decision and have decided which specialty fits you best, consider your competitiveness for both the specialty (as outlined above) and for individual programs. Resources for this include the individual web sites of programs you identify as interesting to you or have been suggested by your mentors. These often have key information that will be pertinent as you consider programs that best fit your application and career goals. Another resource is the Fellowship and Residency Electronic Interactive Database Access System (FREIDA) maintained by the American Medical Association (AMA).[4] This contains data populated by residency programs via an annual survey conducted jointly by the AMA and the Association of American Medical Colleges. This can help give you background information about individual programs.

12.4 How the Match Works

12.4.1 Electronic Residency Application System (ERAS)

The Electronic Residency Application System (ERAS) is the single, generic application that houses your basic demographic information, your curriculum vitae, your personal statement, letters of recommendation, USMLE Transcripts, and a list of the programs to which you are applying.[5] ERAS is the main application that will be sent to all of your selected residency programs. Program directors use the ERAS application to determine your competitiveness and utilize this interface to decide who will be invited for an interview. You can begin to edit your application in May

[4] http://www.ama-assn.org/ama/pub/education-careers/graduate-medical-education/freida-online.page

[5] https://students-residents.aamc.org/attending-medical-school/how-apply-residency-positions/applying-residencies-eras/

of the application year, and should plan to submit the application mid-September. You want to be complete on the day the system opens or certainly as early as possible. You can provide updates to your application over time. Do not worry about the Dean's letter as these seem to go in later and later each year. But, make sure to give your letter of recommendation writers plenty of advanced notice and reminders as the deadline approaches.

12.4.2 National Residency Matching Program (NRMP)

The National Residency Matching Program (NRMP) runs the main residency match that connects applicants with residency programs. (http://www.nrmp.org/) All residency programs registered in by the NRMP are accredited by the Accreditation Council on Graduate Medical Education. All applicants and participating institutions participate in the NRMP in the same fashion i.e. both applicants and programs rank each other, and the algorithm "matches" the highest ranked overlap of both applicant preference and program acceptance. No opportunity exists for either applicant or program to offer or accept an early position outside of the match.

Each applicant submits a Rank Order List. Each program submits an ordered list of interviewed applicants. Once the applicant has been "matched" to the highest ranked position on their list, the Match for that applicant then becomes final, and his/her name is removed from the list of all other programs. It is not possible to match in a lower ranked program, if you are slotted into a position at a higher ranked program on your list.

Urological surgery and neurosurgery do not participate in the NRMP match. As noted earlier, candidates for residency positions in these surgical subspecialties participate in a separate early match (San Francisco match). It is important for students interested in these specialties to check the timelines for the early match with their medical schools.

12.4.2.1 How Does the Couples Match Work?

The NRMP Registration, Rankings and Results (R3) system allows couples to participate in the Match as a pair. (http://www.nrmp.org/match-process/couples-in-the-match/) The system is designed to link rank lists at the request of a pair of applicants. Each person in the pair must enroll in the same Match, and indicate in the R3 system that he/she intends to participate as a pair. The individuals in the pair will need to rank the same combinations of programs. The match algorithm will treat the individuals as a pair. This will require a lot of discussions about preferences and competitiveness between the couple.

The couple's match works like the individual match in that coupled applicants will match at the highest rank combination in which both have been accepted. No formal documentation is needed to confirm the nature of the relationship between the pair to participate in the couple match; any two people may agree to pair within the match.

In 2013, couples matched with a 95.2 % success rate. This means that the system was able to identify a match that satisfied one of the combinations submitted by the pair. It does not mean that each member of the couple was as successful as they might have been individually. This process highlights the need for medical couples to compromise in order to achieve happiness in both personal and professional endeavors. The Couples Match does not extend to the Military Match or the early match. Couples entering into the couples match should discuss ranking options with their medical school advisors.

12.4.2.2 Military Match

The Military Match is for students who have been supported by the military's Health Professions Scholarship Programs (HPSP).[6] In exchange for financial support of a medical education, some students will complete residency training at a military hospital. Other students will have the option to request civilian deferment to complete residency at private institutions. It is encouraged that students enter both the Military Match as well as the NRMP, as those not selected for military GME still have time to apply and be successful.

12.4.3 Categorical and Preliminary Surgery Programs

A "categorical" residency program provides training for the requisite number of years and experiences required to become board eligible in a medical specialty. A "preliminary" surgery program is a basic entry position in a surgical program. Designated preliminary programs serve as transitional programs for people entering categorical programs that require 1 year of residency prior to enrollment in the program. Non-designated preliminary programs serve as a launching pad to a career in one of several specialties for people who do not match into categorical programs. Non-designated preliminary surgery programs can be used as an opportunity to improve an applicant's application and overall qualifications for the next year's residency match. They can also be used as an audition for a categorical spot at the sponsor institution for outstanding candidates.

[6] http://www.militarygme.org

12.4.4 Not Matching and the Supplemental Offer and Acceptance Program® (SOAP®)

Not everyone matches. Unmatched and partially matched applicants are notified a few days before the actual match, and encouraged to enroll in the SOAP (Supplemental Offer and Acceptance Program). (http://www.nrmp.org/residency/soap/) There is not a lot of time to recover from the emotional toll of not matching before the student needs to make meaningful decisions about his/her next step. If you do not match, you should call mentors and the guidance office at the medical school to fully and quickly explore options. The student must candidly review the application process, and future goals and objectives. There are five decisions to consider: (1) withdraw from the match and defer graduation to get a degree or do research to enhance the application for the following year, (2) enter the SOAP in the original specialty, (3) enter the SOAP for a different specialty, (4) graduate and choose an alternative career, or enter the match independently. The fourth choice is not recommended. At 6:00 pm (Eastern Standard Time) on the Thursday of Match week, a list of programs participating in the SOAP is made available through medical schools. All programs with unfilled spots can opt to participate.

Students can apply to the unfilled programs by submitting their ERAS application to the unfilled programs. They can submit applications to multiple specialties as well. Based upon the ERAS applications received, program directors create a preference list of applicants and positions are filled over the course of several application cycles. Applicants may receive multiple offers in any round; however, they have only 2 h to accept or reject an offer. The process continues until remaining programs are filled.

12.5 Conclusions

Your candidacy as a surgical resident depends upon your performance before and during medical school, as well as the specialty to which you are applying. You should be mindful of the characteristics of the successful applicant: honesty, integrity, hard-working and a committment to a surgical career. Use the provided tools to help assemble the pieces of your application. There are many paths to becoming a successful surgeon. You should find the path and location that will afford you the luxury of support and rigorous training. Embrace a career that will keep you engaged throughout your residency and beyond. Have fun and Good luck!

References and Helpful Links

General Surgery

https://www.facs.org/education/resources/residency-search/specialties/general

Plastic Surgery

https://www.abplasticsurgery.org/about-us/plastic-surgery/
https://www.facs.org/education/resources/residency-search/specialties/plastic

Vascular Surgery

https://vascular.org/career-tools-training

Cardiothoracic Surgery

http://www.sts.org/residents-students
http://www.tsranet.org/
http://www.ctsnet.org/program-profiles

Urology

https://www.facs.org/education/resources/residency-search/specialties/urology
https://www.auanet.org/education/urology-and-specialty-matches.cfm

Neurosurgery

https://www.facs.org/education/resources/residency-search/specialties/neuro
http://www.aans.org/Young%20Neurosurgeons/Medical%20Students/Questions%20You%20Should%20Ask.aspx

Orthopedic Surgery

https://www.facs.org/education/resources/residency-search/specialties/ortho
http://www.aaos.org/Membership/MedicalStudentResources/

Otolaryngology: Head and Neck Surgery

https://www.facs.org/education/resources/residency-search/specialties/oto
http://www.entnet.org/content/what-otolaryngologist

ERAS, NRMP and SF Match

https://www.aamc.org/services/eras/
http://www.nrmp.org/
https://www.sfmatch.org/