Career Counseling in Radiology

Frequently-Asked Questions

This booklet has been prepared by the Department of Radiology in response to questions frequently asked by medical students who wish to explore the training and career opportunities in this field. We hope that it will be helpful to students and serve as a basis of discussion in individual meetings with faculty members and residents.

- Can you give me a brief description of the field? What are the key elements of this field that define it?

Radiology is a dynamic specialty that interfaces with most other disciplines in Medicine. It includes the following imaging modalities radiographs, computed tomography, ultrasonography, nuclear medicine, magnetic resonance imaging, functional imaging and interventional radiology. It is a constantly changing and rapidly expanding field because of new technologic advances. As a radiologist, the possibility of career choice is as varied as the number of specialties in medicine. One can opt to practice General Radiology or subspecialize in one aspect of Radiology such as Neuroradiology, GI Radiology, Pediatric Radiology, Interventional Radiology and others. Radiologists work in private offices, hospitals (university and community) with and without medical students and residents.

Radiologists provide major input in the care and management of patients via consultations with house staff and referring physicians. Our primary role is to assist the referring physician in the diagnosis and management of particular clinical problem. The radiologist is heavily relied upon by most physicians. Although a large portion of your time is spent looking at and interpreting image studies, a radiologist can have a great deal of patient contact, especially in GI Radiology, Interventional Radiology, Mammography and Ultrasonography.

It also requires knowledge of the broad range of human diseases, and an understanding of the information the referring clinicians are looking for when they refer their patients for imaging studies.

- What is the patient population that I will encounter? Will it include both children and adults? Will there be emergency work? What types of technology will I encounter?

All types of patients can come under the care of a radiologist: young, old, male, female.

Many types of diseases and abnormalities requiring emergency diagnosis and treatment rely on diagnostic imaging as part of the patients work-up. You will be required to work evenings, nights and weekends as a radiologist, especially if you are in a hospital based practice.

Radiologists supervise technicians who have been trained to program and operate the machines which create the diagnostic images. There are different types of technicians for each of the major imaging modalities. Radiologists must thoroughly understand the theory and physics relevant to all the modalities, in order to properly supervise these technicians and understand how to manipulate the images in order to extract maximum information from them.

- Is it possible to describe the personality characteristics of many physicians in this field?

Radiology is a broad-based discipline; therefore, it would be difficult to characterize a typical radiologist's personality. Most of us share a love of solving problems (since that is what arriving at a diagnosis is all about), anatomy and explaining things to others, since ours is a consultative specialty.

- How long is the training program/residency?

There are two parts to graduate training in radiology after medical school. First, all applicants must complete an internship in a clinical field such as internal medicine, general surgery or a flexible or transitional internship encompassing various months spent rotating through numerous medical fields, akin to the clerkship year of medical school. This is followed by four years in a dedicated radiology residency program. Thus, the entire post-graduate training requires five years (exclusive of fellowships – see below).

- Are there fellowships available after residency?

Many radiology residents opt to continue their formal training by enrolling in a one or two year subspecialty fellowship. The types of fellowships align with the various subspecialties in radiology: pediatric, neuropathology, musculoskeletal, abdominal, cardiothoracic, interventional, mammography/ women's imaging, etc.

- How do I know if my academic record/grades will make me a suitable applicant?

Radiology has been a competitive field to enter, and most successful applicants are usually in the top one-third of their class, based on their grades.

- What is the role of my USMLE Step 1 score? What is a competitive score to qualify for an interview? If I failed Step 1 what are my options? Should I take Step 2 early?

There are various components of the residency application. The role of any one of these is an inexact science. The USMLE Step 1 score can be used to compare the academic proficiency of residency applicants in the basic sciences. The mean score of Downstate students who matched for radiology residency in 2012 and 2013 was 243. Failing Step 1 contributes to an uncompetitive application. The earlier you take Step 2 after completing your core clerkship rotations, the more likely it is that this material will be fresh in your mind. This consideration must be balanced with adequate time to properly prepare for the exam.

- Do I need a Step 2 Clinical Knowledge score to be screened for an interview? To be ranked?

Submitting a Step 2 Clinical Knowledge score is not absolutely necessary to be screened for an interview, but it becomes more important if your Step 1 Score was sub-par. Your score should be submitted well before the ranking process begins.

- Is there anything that I can do in my rotation or elective experience in this field to enhance my qualifications?

Learning radiology is like mastering a foreign language. The first task is to understand the grammar and vocabulary. You can put this information to practical use when you dictate reports to be sent to the referring physicians. Similarly, in RADI 4550, the radiology course taken in the fourth year, there is assigned reading, to help you familiarize yourself with the vocabulary and basic principles of image interpretation. Keeping current in these assignments will enable you to extract more useful information from the diagnostic images you will encounter during scheduled learning activities. You will also have more productive conversations about imaging when you present cases during the rotating exhibit sessions. During this rotation you will also learn the importance of using a systematic approach in the evaluation of diagnostic images.

- Should I take outside electives in other institutions? If so, how many are advised and allowed?

Every student applying in radiology must take the course mentioned above, RADI 4550. This will give you a better idea of what radiology is like. Many applicants do take an additional two or four-week elective in a particular radiology subspecialty, but it is by no means necessary. There are many advanced radiology electives offered here at Downstate. You can also take these electives at other institutions. It's never a bad idea to enroll in an extramural elective so you can learn how medicine is practiced at another institution. Do not apply for an away- elective under the impression that you are "auditioning" at that institution; while a poor performance will always be detrimental, a good performance will not necessarily enhance your chances. Also, consider taking electives in other fields that employ significant amounts of diagnostic imaging in their patients' work-ups and management. Understanding the role of imaging in these disciplines will make you a better radiologist

- If your field requires a preliminary year what are your recommendations regarding that year?

As mentioned above, a preliminary year of training is required before entering radiology residency. Most people complete a preliminary internship in Internal Medicine. Some do a year of General Surgery and other enroll in a transitional or flexible internship, where they will rotate among various medical fields, similar to the clerkship year of medical school. The preliminary internship application and the radiology residency application are submitted simultaneously (because radiology residencies select their applicants two years in advance). From the time of submission both applications (internship and residency) have the same schedule for deadlines, interviews, and rankings, since they culminate on the same Match Day.

- Is a research experience important in my application to this field? Do I need to do a one year research experience? Will research offset a low Step 1 score? Should I have publications to qualify for your field?

Research experience is always desirable, but certainly not mandatory for a successful application for radiology residency. It enhances the application and demonstrates the applicants understanding of scientific principles, organization, inquisitive nature, and follow-through. While being a listed author in a paper published in a radiology journal would be the most desirable outcome, organized research in any field illustrates these positive attributes. Exceptional research might mitigate a suboptimal Step 1 score.

- Is community service important in my application to this field?

Community service always enhances an applicant's resume, and extensive and significant service might help offset a lack of research experience. It most likely would not compensate for a sub-par academic performance.

- What do you advise on obtaining letters of recommendation? Should they all be from the field? How many should I have? Do I need a chair's letter? If so, how do I obtain that letter?

You should request letters of recommendation from faculty who have had the opportunity to evaluate your performance first-hand and who have a high opinion of you and your abilities. Three letters are required. At least one should come from a radiologist and a clinician. The third may come from either source. You may use the same letters for your application for your preliminary year. You do not need a Chair's letter. An enthusiastic letter from someone who truly knows you is almost always more valuable than one from an author whose connection to you is more tenuous, regardless of that person's title.

- How do I meet with residents in the field and ask them to share their experiences and advice? Can I find residents with educational backgrounds similar to mine?

Contact our Residency Coordinator, Ms. Gladys Ortiz, at 718-245-2682. She will help schedule a meeting or you can speak informally with the radiology residents in the Radiology Department. All of the residents attend our departmental Grand Rounds (usually held Tuesdays 12 – 1 pm in Lecture Hall 1B of the Education Building). If you drop by they would be glad to discuss our program and answer any questions. Contact Ms. Esther Neiman, our department's Medical School Coordinator at 718-270-4664, for a schedule.

- If I want to learn more about the field, can you recommend how I do that?

The best way to start learning about radiology is to enroll in the two-week elective for third year medical students, RADI 4551. Feel free to contact Dr. Steven Ostrow, the primary faculty advisor for medical students at 718-270-2915.

Information Available On- Line

http://www.rsna.org
Portal for all of radiology, including links to medical students interested in Radiology. Follow "Science and Education" to "Resources for Residents", which allows you to research residency positions.

http://medicalstudent.com/
"A digital library of authoritative medical information for all students of medicine", curated by Michael P. D'Alessandro, M.D. This is an extensive site with current links to all areas of medicine created by a Radiologist. This site won several awards.

http://radcentral.com
This site has recently been revised. Typing "residency information" into the search box will lead you to some useful links.

http://theabr.org/ic/ic_special_landing.html
The American Board of Radiology (ABR) has a web page with links to information about special program options for diagnostic radiologists, including the DIRECT Pathway.