

# AMSER GUIDE TO APPLYING FOR RADIOLOGY RESIDENCY

VERSION 12 – JULY 2023

Updated with the latest statistics and information on Diagnostic and Interventional Radiology Residency

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Contributors: Atul Agarwal<sup>1</sup>, Garrett Barfoot<sup>2</sup>, Biren A. Shah<sup>3</sup>, Kathryn W. Zamora<sup>4</sup> <sup>1</sup>Indiana University School of Medicine, <sup>2</sup>Ross University School of Medicine (Medical Student), <sup>3</sup>Detroit Medical Center/Western Michigan University Homer Stryker M.D. School of Medicine, <sup>4</sup>The University of Alabama at Birmingham

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Contributors: Atul Agarwal<sup>1</sup>, Garrett Barfoot<sup>2</sup>, Biren A. Shah<sup>3</sup>, Kathryn W. Zamora<sup>4</sup> <sup>1</sup>Indiana University School of Medicine, <sup>2</sup>Ross University School of Medicine (Medical Student), <sup>3</sup>Detroit Medical Center/Western Michigan University Homer Stryker M.D. School of Medicine, <sup>4</sup>The University of Alabama at Birmingham

#### GENERAL ADVICE ABOUT APPLYING TO RADIOLOGY RESIDENCIES

Contributors: Vikas Agarwal<sup>1</sup>, Peter Haar<sup>2</sup>, Anugayathri Jawahar<sup>3</sup>, Shivam Khatri<sup>4</sup>, Nisa Cem Oren<sup>5</sup>, Donna Magid<sup>6</sup>, Biren A. Shah<sup>7</sup>, Chris Straus<sup>8</sup>, Carissa White<sup>9</sup>, Aaron Wyse<sup>10</sup>

<sup>1</sup>University of Pittsburgh Medical Center, <sup>2</sup>Virginia Commonwealth University School of Medicine, <sup>3</sup>Northwestern University, <sup>4</sup>The City University of New York School of Medicine (Medical Student), <sup>5</sup>University of Chicago Medical Center, <sup>6</sup>John Hopkins Medicine, <sup>7</sup>Detroit Medical Center/Western Michigan University Homer Stryker M.D. School of Medicine, <sup>8</sup>University of Chicago Medical Center, <sup>9</sup>Penn State Health, <sup>10</sup>The Mayo Clinic Arizona

#### WHAT MAKES A SUCCESSFUL APPLICANT AND HOW SHOULD I PREPARE?

Contributors: Vikas Agarwal<sup>1</sup>, Peter Haar<sup>2</sup>, Anugayathri Jawahar<sup>3</sup>, Shivam Khatri<sup>4</sup>, Nisa Cem Oren<sup>5</sup>, Donna Magid<sup>6</sup>, Biren A. Shah<sup>7</sup>, Chris Straus<sup>8</sup>, Carissa White<sup>9</sup>, Aaron Wyse<sup>10</sup>

<sup>1</sup>University of Pittsburgh Medical Center, <sup>2</sup>Virginia Commonwealth University School of Medicine (Medical Student), <sup>3</sup>Northwestern University, <sup>4</sup>The City University of New York School of Medicine (Medical Student), <sup>5</sup>University of Chicago Medical Center, <sup>6</sup>John Hopkins Medicine, <sup>7</sup>Detroit Medical Center/Western Michigan University Homer Stryker M.D. School of Medicine, <sup>8</sup>University of Chicago Medical Center, <sup>9</sup>Penn State Health, <sup>10</sup>The Mayo Clinic Arizona

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Contributors: Peter Haar<sup>1</sup>, Anugayathri Jawahar<sup>2</sup>, Jason Kim<sup>3</sup>, Donna Magid<sup>4</sup>, Biren A. Shah<sup>5</sup>, Natalie Stratemeier<sup>6</sup>, Kathryn Zamora<sup>7</sup>

<sup>1</sup>Virginia Commonwealth University School of Medicine, <sup>2</sup>Northwestern University, <sup>3</sup>California Health Sciences University (Medical Student), <sup>4</sup>John Hopkins Medicine, <sup>5</sup>Detroit Medical Center/Western Michigan University Homer Stryker M.D. School of Medicine, <sup>6</sup>OU Health – University of Oklahoma Medical Center, <sup>7</sup>The University of Alabama at Birmingham

#### SO YOU GOT THE INTERVIEW, NOW WHAT?

Contributors: Peter Haar<sup>1</sup>, Anugayathri Jawahar<sup>2</sup>, Jason Kim<sup>3</sup>, Donna Magid<sup>4</sup>, Biren A. Shah<sup>5</sup>, Natalie Stratemeier<sup>6</sup>, Kathryn Zamora<sup>7</sup>

<sup>1</sup>Virginia Commonwealth University School of Medicine, <sup>2</sup>Northwestern University, <sup>3</sup>California Health Sciences University (Medical Student), <sup>4</sup>John Hopkins Medicine, <sup>5</sup>Detroit Medical Center/Western Michigan University Homer Stryker M.D. School of Medicine, <sup>6</sup>OU Health – University of Oklahoma Medical Center, <sup>7</sup>The University of Alabama at Birmingham

#### **ONLINE RESOURCES**

Contributors: Peter Haar<sup>1</sup>, Anugayathri Jawahar<sup>2</sup>, Jason Kim<sup>3</sup>, Donna Magid<sup>4</sup>, Biren A. Shah<sup>5</sup>, Natalie Stratemeier<sup>6</sup>, Kathryn Zamora<sup>7</sup>

<sup>1</sup>Virginia Commonwealth University School of Medicine, <sup>2</sup>Northwestern University, <sup>3</sup>California Health Sciences University (Medical

Student), <sup>4</sup>John Hopkins Medicine, <sup>5</sup>Detroit Medical Center/Western Michigan University Homer Stryker M.D. School of Medicine, <sup>6</sup>OU Health – University of Oklahoma Medical Center, <sup>7</sup>The University of Alabama at Birmingham

# INTRODUCTION

This document is intended to give you guidance when considering or applying to a residency in radiology. It includes answers to the most common questions that advisors have been asked, as well as some "hard data" from the national websites. Some advice reflects the personal opinion of the authors.

#### WHY RADIOLOGY?

The following is general information about the specialty and the sort of personalities that tend to enjoy it as a profession.

Resource: Careers in Medicine® (CiM) Choose Your Specialty Radiology-Diagnostic

- 1. You can be a general or a multi-specialist radiologist, or specialize in one or more areas, e.g., pediatric radiology, neuroradiology, ultrasound, emergency radiology, body imaging, chest radiology, musculoskeletal radiology, breast imaging, women's imaging, nuclear medicine, interventional radiology (IR), etc. Initial training in radiology is general and area(s) of subspecialty training can be decided upon after several years in residency. In private practice, you will probably do general radiology, possibly with an emphasis, and in academic radiology, you will probably work in one area or only a few areas. IR is a dedicated pathway which is determined in advance of other subspecialties in radiology residency (See section on "How Long is Radiology Training").
- 2. Subspecialties vary as to their level of patient contact from little to significant. Individuals can gravitate towards what they personally prefer.
- 3. Subspecialties vary in regard to the percentage of procedures vs. interpretation.
- 4. There are opportunities, even in private practice, for those who enjoy teaching and research, e.g., by being affiliated with or by volunteering at an academic center.
- 5. Radiology is evolving as new and improved modalities become available.
- 6. Radiologists are rarely bored they deal with a wide variety of modalities and pathology.
- 7. Vacation and salary packages in radiology tend to be good, and it has been one of the higher-paid specialties. It is difficult to give a figure as it depends widely on the area of the country, years of service and private vs. academic practice. Vacation may range from 4-13 weeks.

- 8. Teleradiology gives some radiologists the ability and flexibility to work 100% remotely from home or in a hybrid work model.
- 9. Radiologists tend to be happier with their career choices than many other professionals.
- 10. There are opportunities to work and volunteer internationally.

#### What kind of people enjoy radiology?

- 1. People who are "task-oriented" do well in radiology. Did you like to do problem sets in high school?
- 2. People who enjoy the consultative medical role, "a physician's physician" with considerable range of pathology and work across all medical specialties.
- 3. People who can make informed decisions and "move on" do well we make many more "disease/not disease" decisions during a working day than most specialties.
- 4. People who enjoy puzzles and mysteries, and the problem solving, analytical nature of the profession.
- 5. The stereotype of the "visual learner" (although that includes most people!), including those who love anatomy, and seeing disease processes "in life."
- 6. People who like surgical procedures but don't want to be a surgeon. Many radiology subspecialties do procedures in addition to IR.
- 7. People who enjoy continual change and new advances, often technical/computer with "cool toys." Technical/computer whizzes love the "cool toys" as part of the job. The ability to produce spectacular images...but most of us are <u>not</u> computer geeks, we work with medical physicists and experts as needed!
- 8. People who want to be able to work part-time, given we work as consultants and in groups, allows for shifts and ability to be flexible when you are "on."
- 9. People who don't mind that other physicians "get the credit" for the diagnosis or treatment, especially from the patients. This is changing as there are more "radiology clinic" models where the patients talk to the radiologist about their studies.

# WHY **NOT** RADIOLOGY?

We know that radiology is not everyone's cup of tea! Some aspects to consider:

- 1. Longer residency compared to primary care specialties. Almost all radiologists do a fellowship, which also adds training time.
- 2. More independent study time required than in most other specialties, where you learn "on the job" by direct patient interaction.

- 3. More study time required due to the breadth of knowledge required, i.e., all organ systems and diseases.
- 4. More study time required throughout career to keep up with new technologies and trends. (Are we seeing a pattern?)
- 5. Variable patient interaction and follow up.

BUT: specialties such as women's imaging and IR have significant patient contact and designated clinics. "Radiology clinics" are becoming more popular and direct patient impact is becoming more evident year over year.

- 6. More physician consultation time your workday is often balancing several activities, exam production, physician consultation and interpretation, leading to shifting expectations or interruptions.
- 7. A desirable trait is work efficiency. Need to have focused attention over extended periods of time to be able to read 50 head CTs or 100 chest x- rays.
- 8. Imaging represents a large part of the cost of healthcare costs, anticipate changes in reimbursement in future years, i.e., salary support.
- 9. Radiology is a "24/7" subspecialty.
- 10. Competition with other specialties regarding imaging. BUT: this tends to fluctuate over time.

# TIMELINE

Quite often students do not get exposed to radiology until their third or fourth year of medical school. As a result, students may have a hard time deciding whether radiology is a specialty to consider as a career. The timeline illustrated below is an ideal guideline, however, it is important to realize that even if you decide as late as mid-summer, or even fall, in your 4th year of medical school that you wish to apply to a radiology residency program, it is not "too late." In these situations, it is important to seek out guidance and mentorship at any point in the process. Most importantly, do not assume you are at a huge disadvantage. Generally, students overestimate the negative – get informed with quality information before making assumptions.

## FIRST YEAR OF MEDICAL SCHOOL

#### GENERAL

- Job one: Study hard!
  - We can't underestimate the value of having a solid knowledge base... and doing well on USMLE Step 2 and/or COMLEX (for D.O. students), shows you are diligent and likely to succeed in

residency.

# Despite Step 1 (and COMLEX 1) now being pass/fail, the value of studying for and passing Step 1 cannot be overstated as serving as a base of foundational knowledge.

- <sup>°</sup> You will have greater options i.e., you won't be shut out of any specialty if you have a solid Step score.
- Be well-balanced:
  - Join student interest groups to learn about different fields. You aren't obligated to pursue a particular specialty just by checking it out.
  - <sup>o</sup> Check into the availability of a Radiology Interest Group at your medical school and consider joining <u>RadSIG</u>. If there is not a current radiology interest group, consider starting one.
  - ° Get involved with one volunteer/charity organization.
  - <sup>o</sup> While prioritizing performing well academically and adjusting to the rigors of medical school, if after a semester or two you feel you have the capacity, consider joining student government, curriculum committees, engaging in peer tutoring, or becoming a teaching assistant for subjects such as anatomy. Although such opportunities are potentially better suited for later years of medical school, they may not exist at your institution following basic sciences, so becoming involved early on may be important.
- Join professional radiology societies including different radiology subspecialty societies:
  - Many radiology societies are free or have only a small membership fee for students.
  - Looks good on residency application, reinforces general awareness, and demonstrates interest in the field - e.g., Radiological Society of North America (RSNA), Association of University Radiologists (AUR)
  - Get to know the field of radiology: (See: "WHY NOT RADIOLOGY?" section)
    - <sup>o</sup> Radiology is a consultation field that needs a deep and broad knowledge base. The specialty has been responsible for all imaging breakthroughs and is far from stagnant. Our efforts often reflect continually changing modalities, workflow, and techniques. It is a field that requires a serious commitment and acceptance to consistent studying to maintain skills and stay current.

- Shadow radiologists and talk to residents to get to know the field. If there are radiology faculty advisors at your school, take time to meet with them. Do not hesitate to seek advice from other resources if your school programming does not have options locally.
- For schools that do not have a dedicated academic radiology department, one may look into seeking mentorship from past alumni that are radiologists or radiology residents. In addition, one can seek out mentorship at radiology meetings (e.g. RSNA, AUR, etc.).

#### SPRING

- If you're not involved in a research project already, begin to look for a project for the summer. Programs like to see that you have the discipline and interest to do research – and it does not have to be in the field you finally decide on. At some point you may have an opportunity to do research in the specialty you choose. A research project will:
  - <sup>°</sup> Broaden your experience and knowledge of the field.
  - Provide opportunities to present your work at a conference and even submit it for publication.
  - Help you work closely with a faculty member, who can write you a strong letter of recommendation. (see <u>"LETTERS OF</u> <u>REFERENCE"</u> section)
  - If your medical school does not have a dedicated academic radiology program, finding a mentor through AUR, RSNA, AMSER, RRA, etc. may be one of the only ways to find a comparable research opportunity. Another option is making a connection with an alum who is willing to involve a M1 student on a project.
  - Have a game plan for your research project.
    - <sup>o</sup> Assess your interests, unique skills, inclinations, and shortcomings.
    - Look for major radiology society national meetings: Radiological Society of North America (RSNA), Association of University Radiologists (AUR), American College of Radiology (ACR), Society of Interventional Radiology (SIR), American Roentgen Ray Society (ARRS), etc.
    - Approach a potential research mentor with a CV or summary of your experiences and skills.
    - <sup>°</sup> Exercise ingenuity and initiative in finding a project. Start early and be persistent.

Pick your research mentor wisely: this is one of the most crucial factors in being productive.

 Ask around for research opportunities and be persistent until you find one. If one doesn't work or the timeline doesn't seem right, consider pursuing another one.

e.g., email the student director(s) in areas of radiology you are interested in for suggestions. They often circulate emails in the department.

- It may help to confirm that the attending you picked has been productive recently.
- Do not expect the attendings to have menus of instantly available projects ready to go.
- You may present your own ideas and ask for mentorship.
- Projects listed as "in progress" or "submitted" do not yet officially exist
  - Show initiative in finishing a project try to set a goal with your mentor, such as an exhibit or presentation at a national conference, rather than vague "research."
  - Consider doing several projects, with different mentors, as you may not know which ones will be fruitful.

#### SUMMER

- If you have done a research project already (paper, exhibit), you may do something else that will strengthen your application, e.g., working abroad on a medical mission, volunteer work, charity work.
- **Summer Stipends** there are multiple opportunities so apply for these.
  - <sup>°</sup> Check with your Dean's Office.
  - Check with professional societies: e.g., RSNA, AUR, Alliance of Medical Student Educators in Radiology (AMSER), Society Nuclear Medicine (SNM), National Institute of Health (NIH), etc.
- If you haven't done so, consider shadowing radiologists, in several specialties.
- Enjoy this summer this is also a great time to travel and have fun.
- If your school does not provide a break between 1<sup>st</sup> and 2<sup>nd</sup> year, the opportunities listed here must be completed concurrently with coursework

during 1st/2nd year, or during the break/gap between basic sciences/Step 1 (COMLEX 10 and the start of clinical sciences.

### SECOND YEAR OF MEDICAL SCHOOL

#### GENERAL

- Continue to be active in your interest groups and other extracurricular organizations. Become an officer of a group, e.g., the Radiology Interest Group.
- Continue your "summer" research or start another project.
- Schedule your 3rd year rotations.
  - Schedule early rotations in areas of your interest to confirm or reject areas. But don't panic if you can't take it early or you don't have a 3rd year radiology rotation at your school – most students do not! It is not about factual knowledge you have <u>learned</u>, radiology programs assume you know very little when you arrive, it is **entirely about you** feeling both comfortable and confident that the career is a great fit.
  - If your school does not have a radiology residency program it likely has hospital affiliations at a site that has a program. Planning 3<sup>rd</sup> year rotations at a site with a radiology residency program could potentially offer a few distinct advantages:
    - Increasing your exposure to the field of radiology.
    - Increasing your exposure to that respective radiology program and its residents, faculty, coordinators, and advisors.
    - Providing opportunities to develop long-standing relationships with residents and faculty by working on radiology-specific projects, which could lead to a strong letter of recommendation.
    - Allowing ample time for radiology project completion, publication, presentation, etc. BEFORE the match application/interview cycle begins the Fall of fourth year.
  - If radiology is a 4<sup>th</sup> year rotation, to get exposure in radiology, you should:
    - Follow up your patients' radiological studies on other rotations.

- Shadow radiologists/talk to radiology residents if you haven't done so already.
- Stay involved with interest groups, if possible.
- \*Special note for International Medical Graduates (IMGs): Sometime during the last semester of M2 year, students need to begin the ECFMG application and certification process with their school. This ensures that upon completion of M2 year, there are no unnecessary, delays and registering for and taking Step 1, and transitioning into M3 year. Oversights with ECFMG requirements/procedures and/or coordination with your medical school can create significant delays.

#### HOW TO STUDY FOR STEP 1:

- Not all students take Step 1 in June of their second year due to changes in the medical curriculum, it could be in January of the second year or much later.
- Study hard during year 1 and year 2. Grades and Step exam performance do count.
  - Despite Step 1 now being pass/fail, it is important to study equally hard for this test, not only to pass it, but also because doing well lays a solid foundation for your clinical years.
  - <sup>°</sup> January Year 2: Begin to review material from year 1, with your priority being to do well in class.
  - Once classes end in year 2, take 4-5 weeks for the intensive Step 1 studying.
  - <sup>°</sup> Take a few full exams to assess where you are and what you should concentrate on.
  - For at least 3 weeks before the exam, go to bed early (e.g., 10p), wake up at 6a, take multiple sets of 1-hour exams – so you simulate the exam day and improve your endurance.

#### • What to use for studying:

Pick a few resources and stick to them.

Use these while studying for the first- and second-year exams. For example:

- ° Online question bank
  - •. USMLE World
- ° National Board of Medical Examiners (NBME) website
  - Mini-tests that use real questions, which may appear on the real test
  - Timed and give you a score report correlates well to end score

- <sup>°</sup> Rapid Review Pathology by Edward Goljan
- First Aid for Step 1 good review resource, but <u>not</u> enough material or detail.
- A well-known acronym for resources utilized by many successful medical students to aid with both basic sciences and Step 1 is "UFAPS"; Which stands for:
  - U U-World
  - F FirstAid
  - A Anki (The "AnKing" deck specifically)
  - P Pathoma
  - S Sketchy

The "AnKing" deck specifically utilized images, mnemonics, and explanations from each of these high-yield resources with a built in spaced repetition tool to maximize retention.

Note for D.O. students: While taking Step 1 and/or 2 is/are no longer required in addition to the COMLEX-USA to enter the Match, it is strongly encouraged to take Step 1 and Step 2 due to the growing competitive nature of the field. Programs with osteopathic students may "know" the conversion of COMLEX performance to USMLE scores. However, having a (strong) USMLE score may give you more options. Historically, students who achieved an excellent score on USMLE Step 1 are likely to be favored over those who took only the COMLEX exam. It remains to be seen what programs will prefer now that Step 1 is pass/fail.

THIRD YEAR OF MEDICAL SCHOOL

#### GENERAL

- 3rd year rotations:
  - Start reading the weekend before the start of the rotation, so you don't come in like a "deer in headlights".
  - Read a short textbook (200-300 pages) rather than go deeply into literature about particular cases.
  - ° Radiology residencies look for excellent grades in the core rotations.
- How to do well in 3rd year:
  - Work and study hard to get honors, especially in medicine and surgery, if you can.
  - Consider talking to several students who got into the AOA (Alpha Omega Alpha) national medical honor society to see if any of their strategies might work for you.

- The grading system for year 3 is subjective. The grade is based on a combination of your evaluation and a "shelf" exam (multiple choice tests taken by all students nationally).
  - Always show up on time, be enthusiastic, offer to help, ask a lot of appropriate questions, and try to learn as much as you can.
    - Stand out from the crowd do more than "just pass."
  - Study hard, like you did in years 1 and 2, for the "shelf" exams.
- If this is your first opportunity to be under the same roof as an academic radiology department, take advantage of that! Outside of the time needed to earn honors marks in your current rotation, make an effort to get to know the radiology residents and faculty at time and places that are convenient for them. Express interest, ask questions, ask for advice, and see if there are any projects (research or otherwise) that you might be able to help with.
- Letters of Reference (see <u>"Letters of Reference"</u> section):
  - If you do well in a rotation, ask for a letter right away so your attending still has details fresh in their minds and will be able to write a more personal letter. It's best if they offer an unsolicited letter, but at any rate, ask if they feel comfortable in writing a strong letter.

#### Plan your 4th year schedule

- Ask current 4th year students at your school, especially students that matched into radiology, as to how, where, and why they scheduled their 4th year schedule and what they would have done again or changed. Talk also with your faculty advisor.
- If Radiology is not a year 3 rotation at your school, apply early for year 4 radiology clerkships - July or August. If you can't get one, meet with the radiology clerkship director to explain your interest in radiology. (see <u>"WHEN SHOULD I TAKE MY RADIOLOGY</u> <u>CLERKSHIP?"</u> section)
- <sup>o</sup> With Step 1 now being pass/fail, planning the timing of "WHEN" to take Step 2 following completion of 3<sup>rd</sup> year core rotations/shelf exams is important. Give yourself enough time to get your Step 2 score back before the application/interview season begins in the Fall of 4<sup>th</sup> year.

#### **SPRING/EARLY SUMMER**

- Contact the Radiology faculty advisor (and any other areas that you are interested in) and arrange a preliminary meeting to discuss your grades and career plans.
- Set up an email account that sounds professional and one that will roll over when your school email closes if it does not have an alumni account.
- Schedule a physical exam and update immunization records and titers, including varicella, in case needed.
- Check the website of programs you are interested in to see if they require anything special.
- Get a letter that you are in good academic standing from academic affairs.
- Update your CV: make it professional-looking and 1 page, longer only if multiple publications.
  - <sup>o</sup> Summarize research, including citations for all your publications another page if needed.
  - <sup>°</sup> Summarize hobbies/interests to add dimension to your profile.
- Start working on your Personal Statement (see "PERSONAL STATEMENT" section) – 1 page only
- Begin filling out your <u>ERAS® Application Worksheet</u>
  - <sup>o</sup> This includes up to 3 geographic preference essays, setting preference or lack of preference essays, and up to 3 most meaningful essays. This may take some time to complete.
  - Presume much of what you write and early versions will never be seen by others. The greatest benefit is you starting to formulate coherent answers and self-awareness used in interviews later in the process.
  - <sup>o</sup> A great personal statement reflects new information not necessarily present in the general application. A read through should generate meaningful adjectives with which you would want to be labeled. It is your opportunity to present more information/skills/qualities otherwise lost to an application reviewer in the more traditional required sections.
- Photograph for applications
  - Play it safe: look professional and show that you understand the unwritten conventions.
    - Don't give anyone the chance to say, "what was he/she thinking...." No weird stuff. No pets. No significant others.
  - <sup>o</sup> The photograph will be used during ranking to help remember who is who so make sure it looks like what you will look like on the day of your interview (clothes, hairstyle, facial hair etc.)

- ° Pleasant smile reshoot if needed.
- ° Head-and-shoulders only.
- <sup>°</sup> Send as jpeg, not too low or high resolution so it prints as ~ 3x4 cm.

#### Away rotations: (see <u>"AWAY ROTATIONS"</u> section)

Consider scheduling at a place where you think you may want to do residency: at a target, not a "reach" or "safe" place.

\*Special note for D.O. and IMGs: The NRMP match data as well as school-specific match data can provide valuable insights into which programs are "IMG-friendly" or "D.O.-friendly" programs, and historically match competitive applicants from your school. This can aid you as an applicant to set appropriate expectations/goals, strategically plan away, rotations, and be judicious in your expenses related to application fees.

#### "Meet the Experts" get-together

Many schools arrange a meeting or dinner for interested 3rd year students with the matched 4th year students (they are the REAL experts in this!) for an information exchange session. If this does not occur at your school, start one by contacting the Radiology faculty advisor (also a great thing to add to CV, in addition to being valuable for you and your classmates). Students who have participated in these get-togethers have found them incredibly useful. Make it informal, e.g., over pizza.

Remember: You are being evaluated at all times at these activities so don't criticize other people or places, gossip, or get drunk.

Also remember you have something to sell - yourself - so be confident.

#### **Mock Interviews**

Given the current situation of residency interviews being virtual, it is highly recommended to practice interviewing. Check with your medical school if mock interviews are offered. Otherwise, you can set one up with a faculty member you don't know so they can give you feedback.

#### FOURTH YEAR OF MEDICAL SCHOOL

#### SUMMER

 If <u>possible</u>, do a Radiology Clerkship/Selective/Elective if you have not done so previously. HOWEVER, do not fret if you are not able or allowed. You are far from alone. It is about self-awareness – not having "radiology activity on your transcript" – that is what is needed.

- Meet with the Radiology faculty advisor to discuss your draft personal statement, letters of reference and program application lists (see sections below). Consider doing **Sub-internship** or **Acting Internship** in medicine or surgery early during 4th year.
  - ° Can boost your grades/evaluations if needed.
  - ° Can yield a strong letter of recommendation, if needed.
  - ° Often required for transitional year or preliminary year applications.

#### **ERAS (Electronic Residency Application Service)**

- You can register and start working on your residency application on June 8.
- ERAS timeline

#### **MEDICAL STUDENT PERFORMANCE EVALUATION (MSPE)**

• Schedule a meeting for your Medical Student Performance Evaluation (MSPE) with your dean.

#### TRANSCRIPT

Check your transcript to <u>make sure</u> all of your grades have been submitted and submitted correctly. Don't let that HONOR you earned get transcribed as a PASS. If you are missing grades, contact the department secretary and use gentle encouragement: "Is there any additional information I can provide to help my evaluator complete this?"

#### Plan to take Step 2

• See <u>"WHEN SHOULD I TAKE STEP 2"</u> below.

#### SEPTEMBER/OCTOBER

Diagnostic Radiology participates in the NRMP Match.

## SUBMIT APPLICATIONS AS SOON AS POSSIBLE ON OR AFTER SEPTEMBER 6. RESIDENCY PROGRAMS START RECEIVING APPLICATIONS ON SEPTEMBER 27.

It shows how motivated and enthusiastic you are about applying to residency.

- Many programs grant interviews on a rolling basis. The earlier you apply, the greater the chance you have of being considered for interviews.
- Make a tentative calendar, making blocks of time for each region you plan on interviewing in. Though grouping interviews by region is less important in current times, given virtual interviews, you may still find it helpful in comparing neighboring programs. The earliest programs start sending out interview offers in late September or early October.

#### OCTOBER/NOVEMBER

- MSPEs are released September 27 along with MyERAS applications and supplemental ERAS applications (if applicable).
- Be strong! You may feel crushed when those rejections start to come (possibly by the end of October or the first two weeks of November)... and then the interview invitations start rolling in.
- Interview offers will come in more steadily until the end of November/beginning of December. California programs usually send out interviews later often in December.
- Schedule as many interviews in November as your schedule allows, enabling greater flexibility later.
- Do not write off a program even if you do not hear from them by December.
- No news means you are still on the list. Applicants cancel interviews so programs may contact you even at the last minute. Always be available to take an interview offer. (See <u>"WHEN YOU CAN CONTACT A PROGRAM</u> <u>DIRECTLY"</u> section)

#### NOVEMBER/DECEMBER

Take a vacation. You want to present your best self at interviews. You want to have time to exercise, rest, and eat well. You'll want to have time to research the program beforehand.

**Interview season:** late October - early February, with the peak in late November to mid-January. Schedule flexible rotations, e.g., online course, research, self-study, flexible clerkships. Consider using vacation/discretionary time in November, December, or both months. If you are unable to take vacation/discretionary time off, ensure that you are on a rotation that gives you flexibility to take time off for interviews.

#### LATE JANUARY-FEBRUARY

Make your rank list: set up meeting with advisors to help with rank order. (see <u>"RANKING PROGRAMS"</u> section )

#### **FEBRUARY-APRIL**

• Consider taking BLS/ACLS early so you won't have to take it at the last minute before internship (and you might get that time off during internship orientation).

#### MARCH-MAY

"Meet the Experts Meeting" - Arrange a meeting with the other 4th years to celebrate, commiserate, and share with Radiology faculty advisor and 3rd years about what you did right or wrong.

SUMMARY TIMELINE (VARIES WITH SCHOOL)	
Contact radiology faculty advisor	As soon as possible, or by March of Year 3
Meet the Experts" Dinner/Meeting	March/April, Year 3
Group Meeting with radiology faculty advisor	April-July, Year 3
Mock Interviews (can arrange if not offered)	May-October, Year 3-Year 4
Radiology Clerkship/Selective/Elective	If not in the Year 3, take early in Year 4
Draft personal statement, geographic preference(s) essay(s), and most meaningful experience essay(s)	June/July, Year 4 (send to advisors/friends)
Final personal statement	July/August, Year 4
Develop program lists	July/August, Year 4, discuss with faculty advisor or dean
ERAS application submission (NRMP Match)	September 6, Year 4 STRONGLY RECOMMENDED on day 1
ERAS applications close	Variable
MSPE released	End of September, Year 4
Interviews	November to January, Year 4
Rank list entry open	Mid-January
Rank list entry close	Mid-February
Did I match?	Mid-March, Monday
Match day	Mid-March, Friday

# GENERAL ADVICE ABOUT APPLYING TO RADIOLOGY RESIDENCIES

WHEN SHOULD YOU CONTACT THE MEDICAL STUDENT RADIOLOGY FACULTY ADVISOR?

- As soon as you are considering radiology as a career, meet with the radiology faculty advisor at your school. If there is no official faculty advisor, meet with the radiology clerkship director and/or the residency program director.
- If you are in your 1st or 2nd year of medical school with a diagnostic radiology residency program, the advisor can direct you to a PGY-2 radiology resident to discuss the field (and the application process) with you, and the advisor can help set up opportunities to shadow radiologists and to get involved in research.
- When shadowing, ask about procedures. There are many types of procedures that are done outside of Interventional Radiology by Diagnostic Radiologists.
- Be honest with your advisor: Does something personal or professional need addressing?

#### HOW LONG IS RADIOLOGY TRAINING?

#### Diagnostic Radiology Residency – 5 years

Application methods:

- Most common application method (PGY 1 + PGY 2-5): apply separately for the intern year and advanced radiology program
  - One year in a preliminary internal medicine, transitional year, or preliminary surgery program – PGY 1 applied separately from the advanced radiology program.
  - Four years in advanced diagnostic radiology PGY 2-5, start at PGY 2 at the same or different institution from the intern year.
- Less common application method (PGY 1-5): Categorical programs: PGY 1 intern year and the PGY 2-5 radiology residency are combined and applied to as one at the same institution.

#### Diagnostic Radiology Fellowships - 1 year

- Most radiology residents complete 1 year of fellowship training.
- Most common fellowships are: Abdominal imaging, breast imaging, cardiothoracic imaging, musculoskeletal imaging, neuroradiology (1 to 2 years), nuclear medicine, pediatric radiology, and women's imaging.

 Though the above fellowships are diagnostic radiology categories, many, including musculoskeletal, breast, abdominal, etc., involve procedures unique to those subspecialties.

Interventional Radiology - 6 to 7 years

Overview of IR training options outlined in chart form here:

(https://www.sirweb.org/learning-center/ir-residency/) as well as described below.

- Integrated IR Residency
  - ° Apply for during year 4 of medical school
  - 1 year of internship (usually preliminary surgery), 5 years of residency, 6 years total
  - ° https://www.sirweb.org/learning-center/ir-residency/integrated/
- Independent IR Residency
  - <sup>°</sup> Apply and match into DR residency as a medical student
  - Apply for independent IR residency during year 3 or PGY-4 of DR residency
  - Complete 2 years of Independent IR residency after DR residency graduation
  - ° 1 year of internship, 4 years of DR, 2 years of IR, 7 years total
  - https://www.sirweb.org/learning-center/irresidency/independent-ir-residency
- Early Specialization in Interventional Radiology (ESIR)
  - <sup>°</sup> Apply and match into DR residency as a medical student
  - DR residency must have associated IR residency and ESIR designation
  - Within the program, apply to ESIR during year 1 or 2 of DR residency
  - ° Transition into ESIR
  - 1 year of internship, 4 years of DR with ESIR, 1 year of IR, 6 years total
  - <sup>°</sup> <u>https://www.sirweb.org/learning-center/ir-residency/esir/</u>
- Some academic radiology departments may offer additional options such as research tracks. Check individual program websites.

#### How do I apply to different types of programs?

• The majority of DR and IR programs are for advanced positions (start as PGY2) and do not include the intern year. You would apply for and rank the intern year separately.

- There are some programs that include the intern year (categorical), for which you do not need to interview separately.
- You need to apply for DR and IR programs separately.

#### WHEN SHOULD I TAKE MY RADIOLOGY CLERKSHIP?

- If you are applying to a diagnostic radiology residency, a general diagnostic radiology clerkship/elective is critically important. This can help to confirm your interest in the field, help you to meet faculty, and potentially get a letter of recommendation.
- Take it as early as possible, if available in your 3<sup>rd</sup> year. This will confirm your interest in radiology and help you get involved in relevant activities.

## WHAT OTHER ELECTIVES ARE THERE IN RADIOLOGY AND SHOULD I TAKE THEM?

Do an elective in interventional radiology if you are applying to IR residency. You may consider doing this as an away elective.

Additional radiology electives after doing an initial radiology experience may be considered:

- Help confirm or deny interest if you are still tentative.
- Show potential programs your interest in a particular region especially in a region you may want to move to, to which you may not have apparent ties.
- Increase your potential sources for letters of reference. However, most programs will be more interested in strong letters from your non-radiology clerkships, such as internal medicine and surgery.

If you do an additional radiology elective, you should:

- Do a subspecialty elective rather than repeat the basic elective, e.g., neuroradiology, interventional radiology, women's imaging. Take a musculoskeletal radiology elective if you were previously interested in orthopedics, or a breast imaging elective if you are wondering about a more procedure and patient interaction-heavy specialty besides IR.
  - You will likely have more personal interaction and will get to know the radiologists better (good for letters of reference – see <u>"LETTERS OF REFERENCE</u>" section). Remember, the goal of electives is to solidify your interest, make connections with faculty and get LORs.
  - ° Subspecialty rotation reads better on your transcript.

- Consider a research elective in radiology. This is an opportunity to get to know a radiology mentor better (good for letters of reference—see <u>"LETTERS OF REFERENCE</u>" section). It will also allow you to produce something from it – e.g., a paper, case report, poster, abstract, teaching module.
- Consider a different institution to get a different perspective and experience (see <u>"AWAY ROTATIONS"</u> section) and to let them get to know you.

Don't do more than one extra radiology elective because:

- You have the rest of your life to do radiology. You do not NEED to start learning radiology before residency.
- Other electives will broaden your understanding of medicine and make you a more interesting candidate.
- This might be your last chance to do something outside of radiology.

## WHAT NON-RADIOLOGY ELECTIVES SHOULD I CONSIDER?

It will be more beneficial for you to take a non-radiology elective than a second radiology elective.

- Consider rotations that will expose you to the broadest understanding of what referring clinicians do and ultimately become more aware of what and <u>how a</u> <u>radiologist can support fellow physicians in alternate specialties</u>. Radiologists serve patients and clinicians, so the better we understand what they are doing day-to-day, the better we can support clinicians as an effective consultant.
- Take advantage of your elective time to explore that other niche non-radiology specialty such as ophthalmology or radiation oncology to make sure you don't like it better.
- Take a research elective with a radiology mentor to build your CV.
- If you are interested in IR, consider a vascular surgery elective to see the difference between the two.
- Take an elective that will help prepare you for internship.

#### AWAY ROTATIONS

Away radiology rotations are not necessary. Not all programs take outside students. Away rotations can be a double-edged sword:

• Pros

- <sup>°</sup> You get insight into what the program is like, and what it is like living in the region.
- <sup>°</sup> The program gets to know you well and it shows your interest in the program.
- It may get you an interview when you might not have been offered one based solely on your application – yet historical data shows this is not likely. There are very few interviews granted out of kindness.

#### Cons

- ° No guarantees for interview or matching.
- <sup>°</sup> It is like a month-long interview: you will be compared to the best student they've ever had.
- If you go: Optimize your performance. Be first in, last out. Dress professionally.

Spend your evenings looking things up, preparing, and studying.

- <sup>°</sup> Comments from all house staff are likely to be incorporated, so you are not just "on" with attendings or specific attendings.
- If you do poorly, you lose only one of your potential interviews. We have all had students who have been great for the first couple of days (a.k.a., an interview), but didn't look so good after 4 weeks.

Where to do the away rotation:

- In an area of the country in which you must match. You can consider getting a letter from the program to send to that particular geographic area.
- At an institution you're particularly interested in. This should be a high "target" program where you are likely to get an interview and you want to maximize your potential at matching at the program - not at a "reach" program that you are unlikely to get into.

What - Do your homework:

- Talk to students or residents with ties to the program; look online to identify appropriate meaningful queries/questions about the program.
- Identify your area of interest/ability, and an area which will expose you to the residents, program director, or other people vital to the selection process.
- If you are planning to do research there, set it up ahead of time so you'll hit the ground running.
- Consider a subspecialty away elective. It is important to use your elective time to expand your experience rather than repeat it.

#### When

• Latest by October of Year 4. You might be offered an interview if you are there in November or December but don't count on it. Consider what it will look like if you leave an away elective to interview at another program.

#### How

- Multiple institutions participate in AAMC's <u>Visiting Student Application</u>
   <u>Service</u>
- If the ones you want do not, then you have to apply through the institution directly.

#### VIRTUAL ELECTIVES

• Many schools temporarily halted their in-person radiology electives during the COVID-19 pandemic. Most also stopped accepting visiting students at that time. However, now that the pandemic has subsided, many schools have chosen to continue their virtual electives. Refer to AAMC Visiting Student Learning Opportunities (VSLO) for a list of schools offering virtual radiology electives and for application information.

Keep in mind:

- Virtual electives are for your own educational benefit, don't expect them to be helpful to your residency application.
  - While it may be tempting to apply for these electives as audition rotations, they will likely not provide the faculty interaction necessary to boost your application of generate LORs.
  - The virtual electives also may or may not involve interaction with residency and give you a feel for the program.
- If at all possible, do a radiology rotation in person. If your school doesn't offer a radiology rotation, you can apply for in person away rotations through VSLO, although these are harder to succeed/stand-out on, as discussed above. You can also take advantage of shadowing opportunities at your home institution. Repeat shadowing and long-term relationships with radiologists will be more helpful to your application than a virtual radiology elective.

- In your application and during the interview process, you need to be able to strongly articulate your interest in radiology and convince the program that you have what it takes to succeed as a radiologist. If you have any doubts, take a virtual elective as your last resort to solidify your interest, again, not to boost your application.
- If you have already done in-person radiology electives and need a flexible elective during interview season, virtual electives may be a good option.

## APPROPRIATE BEHAVIOR ON THE RADIOLOGY ELECTIVE

- You will likely have an orientation to your radiology elective. Make sure you understand the expectations and specifics such as: time to arrive each day, dress code, how you will be evaluated, etc.
- Whenever you enter a radiology reading room, politely approach each person and introduce yourself. If possible, start with a resident. (Most radiology programs have resident and faculty rosters posted online, or you can get one from your rotation coordinator.)
  - If the person is actively dictating, the proper etiquette is to wait until they have finished and signed off the exam rather than interrupt.
  - Say, "Hi! I am [your name]. I am a \_\_\_ year medical student on my [radiology elective name]. I want to learn as much as possible. Who should I sit with or what should I do to learn the most and be the most helpful?"

#### \*\*\*Most important- Always be interested! \*\*\*\*

- Ask questions.
  - A good question pace is every other cross-sectional study or once every 10 minutes. You don't want to interrupt the workflow too often.
- Offer to look up clinical history in the EMR or differential in a book or online resource if you are sitting with a resident.
- •. If there is an interesting case, make note of the case and follow up on imaging or pathology reports and inform the attending radiologist or resident the next time you see them. This makes a positive impact that you care and are invested in learning.

- Ask if you can observe procedures and if there is anything you can do to be helpful while in the room.
  - Introduce yourself to the patient as a medical student and ask if they mind you observing.
  - <sup>°</sup> Ask a follow-up question AFTER the procedure.
- Ask if there are any educational conferences or tumor/interdisciplinary boards you can attend.
  - If attending a tumor board, consider asking to present a patient.
- At the end of the day or whenever leaving, be sure to thank each person for their time.
- Look for opportunities while on the rotation to participate in research projects that you can accomplish; for example, you can write a case report (do not be over ambitious since not being able to follow up to completion will act against you). Most programs will appreciate if you complete it even after the rotation is over and score more points during the interview.
- Be genuine.

# WHAT MAKES A SUCCESSFUL APPLICANT AND HOW SHOULD I PREPARE?

- High rank in the first 2 years, good grades in the clinical years, high Step 2/COMLEX scores, research experience, strong letters of reference, a solid personal statement, your overall personality and <u>how you present</u> <u>yourself at the interview are all important</u>.
- According to NRMP's <u>2022 3<sup>rd</sup> ed. Chartering Outcomes in the</u> <u>Match: Senior Students of U.S. MD Medical Schools</u>, the average of matched **Diagnostic Radiology** US MD senior candidates are:
  - STEP 1 244 (Step 1 scores disappear in 2023-2024 application cycle; applicants with pre-2023 Step 1 on record will likely see that score be considered)
  - ° STEP 2 253
  - ° AOA members 19.3%
  - <sup>°</sup> Abstracts, presentations, and publications 8.0
- According to NRMP's 2022 3<sup>rd</sup> ed. Chartering Outcomes in the Match: Senior Students of U.S. DO Medical Schools, the average of matched **Diagnostic Radiology** US DO senior candidates are:
  - COMLEX-USA Level 1 score 625

- ° COMLEX-USA Level 2-CE score 661
- STEP 1 242 (Step 1 scores disappear in 2023-2024 application cycle; applicants with pre-2023 Step 1 on record will likely see that score be considered)
- ° STEP 2 250

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- Abstracts, presentations, and publications 3.9
- According to NRMP's 2022 3<sup>rd</sup> ed. <u>Chartering Outcomes in the</u> <u>Match: IMG MD Medical Schools</u>, the average of matched <u>Diagnostic Radiology</u> IMG MD candidates are:
  - STEP 1 241 (Step 1 scores disappear in 2023-2024 application cycle; applicants with pre-2023 Step 1 on record will likely see that score be considered)
  - ° STEP 2 247
    - Abstracts, presentations, and publications 7.0
- According to NRMP's <u>2022 3<sup>rd</sup> ed. Chartering Outcomes in the</u> <u>Match: Senior Students of U.S. MD Medical Schools</u>, the average of matched Interventional Radiology US senior candidates are:
  - ° STEP 1 245
  - ° STEP 2 253
  - ° AOA members 20.8%
    - Abstracts, presentations, and publications 12.2
- According to NRMP's 2022 3<sup>rd</sup> ed. Chartering Outcomes in the Match: Senior Students of U.S. DO Medical Schools, the average of matched **Interventional Radiology** US DO senior candidates are:
  - COMLEX-USA Level 1 score 646
  - ° COMLEX-USA Level 2-CE score 664
  - STEP 1 244 (Step 1 scores disappear in 2023-2024 application cycle; applicants with pre-2023 Step 1 on record will likely see that score be considered)
  - ° STEP 2 254
  - <sup>o</sup> Abstracts, presentations, and publications 7.8
- According to NRMP's 2022 3<sup>rd</sup> ed. <u>Chartering Outcomes in the</u> <u>Match: IMG MD Medical Schools</u>, the average of matched **Interventional Radiology** IMG MD candidates are:
  - ° STEP 1 261
  - ° STEP 2 270
  - <sup>°</sup> Abstracts, presentations, and publications 5.0
- While the NRMP data above is a snapshot of past data, the components to a successful applicant matching into Diagnostic Radiology are continually shifting and it is about "the complete package" of an applicant to demonstrate the qualities that make a future great radiology colleague.

• Doing things you enjoy is important - if you are an interesting person, happy and self-confident, and feel good about yourself, this will show when you work on the wards and when you interview.

Increasingly medical schools are not including class rank in the MSPEs. In combination with Step 1 now pass fail, this means that quantifiable data to screen applicants is decreasing and therefore Step 2 scores will become increasingly important.

#### WHAT PROGRAM DIRECTORS ARE LOOKING FOR

The <u>2021 NRMP Program Director Survey</u> shows that <u>**Diagnostic Radiology**</u> program directors, for *invitations for interview*, give the highest importance to:

1. USMLE STEP 1 s	score
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2. Medical Student Performance Evaluation

- 3. Letter of recommendation in specialty
- 4. Grades in required clerkships
- 5. Personal statement

For *ranking* of the candidate for the Match, they give the highest importance to:

1. Interactions with faculty during interview
2. Interactions with house staff during interview and visit
3. Interpersonal skills
4. USMLE STEP 1 score
5. Feedback from current residents

The top priority for programs is interactions with faculty and residents during interview, as emphasized in 4 of the 5 important factors listed above. This is because radiology is a 4-year training period and programs need good candidates who are easy to work with rather than just smart residents who might be difficult to work with on a daily basis.

The <u>2021 NRMP Program Director Survey</u> shows that <u>Interventional Radiology</u> program directors, for *invitations for interview*, give the highest importance to:

1. Letters of recommendation in the specialty

2. USMLE STEP 1 score

- 3. Medical Student Performance Evaluation
- 4. Personal Statement
- 5. Perceived commitment to specialty

For *ranking* of the candidate for the Match, they give the highest importance to:

1. Interactions with faculty during interview
2. Interpersonal skills
3. Interactions with house staff during interview and visit
4. Perceived interest in program
5. Perceived commitment to specialty

We suspect that in the absence of Step 1 scores, Step 2 scores will ascend in importance.

## HOW COMPETITIVE IS RADIOLOGY?

General information: Overall Radiology is a competitive specialty choice but comparing to other specialties using known metrics is mildly problematic. Students are already somewhat self-selective and are not equivalent. It may be best to identify and consider personal traits that are endemic to the specialty and their role in the patient care. Within this larger framework a student may be interested in trying to determine their personnel relative rank, yet this is equally limited. It is best to converse with a radiology adviser or mentor, given many candidates have skills and advantages not properly captured by the standard metrics such as board scores or class ranking.

It is important to be able to demonstrate why you as a candidate represent a better option as a future resident. That is skills, capacity, interests, and future goals are not captured in traditional scores and clinical clerkship grades. The following more traditional measurements are outlined but not to be considered absolute.

The parameters are changing so that it might be best view the most recent NRMP data.

#### HOW IMPORTANT ARE YOUR BOARD SCORES?

- While DR residency programs may not have a specific minimum score to grant an interview, many may use Step 2 board scores as a threshold to screen applicants for an interview since Step 1 results is no longer reported as a numerical score. Currently, we are unsure how this change will affect Program Directors' preferences.
- Don't let a slightly lower score scare you away from applying if you have an otherwise strong application. However, it is important that you talk with a radiology faculty advisor, so that you are realistic in your goals and have made back-up plans.

#### WHEN SHOULD I TAKE USMLE STEP 2?

- With Step 1 score now disappearing, we believe Step 2 will likely become its surrogate and be closely scrutinized for applicant stratification. However, performance on core clerkships will also play more of a factor in the comprehensive review of an applicant's application.
- Aim high, so take a month off (or a less rigorous elective if you're more confident). Use something like USMLE World questions.
- It takes about 3 to 4 weeks to get the Step 2 score.
- If Step 2 results are released before you submit the ERAS application, results cannot be withheld.
- If the scores come after the ERAS application submission deadline, you are not obligated to release these scores, but do so if you score well.

So...

• Prepare for and **take Step 2 EARLY**, in July or August. But take it only when prepared.

Since Step 1 is now pass/fail, we anticipate that Step 2 will likely be required at the time of the ERAS application.

## DO I NEED TO DO RESEARCH?

Research is a priority, especially at competitive and academic programs, as it shows that you are proactive and a contributor. While publications are not mandatory, they will greatly increase your competitiveness for matching at these programs. There are also many strong programs that are more clinically oriented and may put little to no emphasis on research.(See <u>"TIMELINE</u>" First Year of Medical School section)

- The average number of abstracts, presentations, and publications for matched DR and integrated IR applicants are 6.4 and 10.3, respectively (NRMP's <u>2022 3<sup>rd</sup> ed.</u> <u>Charting Outcomes in the Match: Senior Students of U.S. MD Medical Schools</u>).
- It is great if the research is related to radiology, but it doesn't have to be, i.e., in the case of a late decision.
- Rigorous scientific pursuits and publishing in any field have much in common and show dexterity and experience.
- Although it is best to start in year 1, it is not too late, even in July of year 4 you can do something short.
  - ° Case reports
  - Exhibits/ Abstract presentations at regional/national/ international conferences
    - Educational/Scientific
    - Case of the Day (e.g., ACR Case in Point)
    - Interesting Case Submission (AMSER)
  - Educational resources e.g., programs, websites that the department of radiology is producing.
- If you started research or published something after you submitted your application, submit a brief summary of this to the programs you've applied to and take this to the interview. If you publish after the interview, you should send this to the programs as well. (See <u>"WHEN CAN YOU CONTACT A PROGRAM DIRECTLY?"</u> section)

Research is helpful but not an open mandate or required.

• With all applicants and applications, you goal is to appear as desirable and beneficial to the selection committee. All applicants and the best applicants are not identical.

• Your goal is to demonstrate as many of the desirable skills needed as a trainee. These skills however vary between sites and types of programs; that is larger academic programs place a higher value on elements of the application which pertain to their greater mission. This concern may not be as significant for a community-based program or where faculty are not personally pursuing research routinely.

Where does research fit into the application process?

- It demonstrates skills and awareness of the scientific profession not easily demonstrated in other venues.
- It shows your capacity and interest to further the quality of care our profession brings to patients.
- It also can show whether you're open to challenging questions and assisting in finding solutions.

Research topics and options are numerous - too much so to list, given that no one area is more or less important.

- The deeper benefit is more about how the experience affected you.
- What this means however remains open it does NOT have to necessarily be research in the field of radiology. You can easily make your case about personal interests morphing with time and schooling - what is key is having gone through the process of doing research or a scientific presentation, such as: identifying a needed question, formulating a project, collecting evidential support and presenting it; either as an oral/poster presentation or written article.
- Ability to or demonstration of communicating and sharing your knowledge is as much of the process showing you're more experienced than another applicant.
- Research shows that you as an applicant have more dimension and skills to share with others.

Research as a member of a group

- Being a part of a larger team is also beneficial.
- Not all work needs to be a personal project and understanding how you can be a member of a larger challenge and assist are skills with value too.
- The real question each applicant needs to ask and ponder is: How did the experience affect you?

Research performed with a mentor or advisor

- Being a member of an authorship group also can provide you with access to potential mentors and letter writers.
- Consider your role or roles in the process (or if multiple projects) consider what skills you have learned and or have following the experience.
- These new skills/elements are most important over the actual science or results presented.
- What an application reviewer is most interested in and trying to gauge is whether you are likely to repeat and redeploy these skills downstream as well as whether you will represent their program well in the future.

What if you don't finish the project or succeed in presenting or publishing the work?

- Clearly any effort that is completed is more valuable than incomplete or "conceptual." It is a question of seeing an effort through to its finish line and generally, Program Directors want house staff that won't leave things undone.
- These self-generated projects are a great gauge of personal traits.
- If you have unfinished efforts you're far from alone. There are many causes of derailment. Do not place blame or give excuses; focus on what positives were achieved possibly and most importantly self-reflection and personal insights learned.

#### HOW IMPORTANT ARE EXTRACURRICULAR ACTIVITIES?

- Better to do one extracurricular activity in depth than many superficially.
- An interest group and some type of volunteer/charity organization is a great start.
- Being an officer or having a leadership position is even better.

#### DIVERSITY IN THE APPLICANT POOL

• Traditionally, as in many fields, many groups were and still are underrepresented. Virtually every program in the country is working to address this.

#### WHAT ABOUT MILITARY MATCHING?

• There are only a few military programs in the country so it is difficult to determine how competitive these may be in any one year. Generally military programs are less competitive than the non-military programs.

• Strongly consider doing an away elective at these programs.

## WHAT ABOUT OSTEOPATHIC STUDENTS?

- Programs vary widely as to whether they take osteopathic students: some do not or rarely interview DO candidates and others welcome them. Students should look at the "track record" of a program (how many DO students have been matched in the last few years) and may consider taking an elective at programs of interest, particularly at allopathic institutions that may not know their osteopathic school well.
- DO candidates should get involved in research to be competitive with their allopathic colleagues.
- Programs with osteopathic students may "know" the conversion of COMLEX performance to USMLE scores. However, having a (strong) USMLE score may give you more options. Consider taking USMLE Step 1 and 2 exams as well as COMLEX. Students who achieved an excellent score on USMLE Step 1 are likely to be favored over those who took only the COMLEX exam. It remains to be seen what programs will prefer now that Step 1 is pass/fail.

#### WHAT ABOUT INTERNATIONAL MEDICAL GRADUATES?

Students from international medical schools, US-IMG or non-US-IMG, can consider applying to radiology residency programs. They share the same disadvantages with the osteopathic students, as detailed above. High USMLE scores (in particular, USMLE Step 2), radiology experiences in the USA, and strong support from a mentor are critical for their successful match.

- They should obtain their ECFMG certifications before their graduation with high USMLE scores.
- They should experience general radiology practice in the USA with elective clerkship, subinternship, or observership programs specifically in academic centers.
- They should prove their fundamental medical knowledge and communication skills while they are in their rotation as well as being a good team player is another key for their success.
- They should get involved in research in the radiology field to improve their CVs as well as their network.

Letters of recommendation supporting their application from their native country are

acceptable, however, letters from clerkships or research fellowship programs in the US are preferred. If obtaining letters of recommendation from one's native country, it is advisable to request the letter writers to upload them to the ERAS website as waived letters rather than candidates uploading them as unwaived recommendation letters.

## WHAT ABOUT APPLICANTS WHO ARE IN OTHER SPECIALTIES?

In the past, applicants from other specialties who have decided to go into radiology have successfully matched into radiology. It is understood that a career choice made as a third-year student sometimes does not work out. Programs do vary as to their interest in these candidates. Experience in another field can be an advantage to some programs.

The applicant's personal statement should definitely address the reason(s) for this change of heart. Also, it will help if their current program is supportive and writes strong letters of reference. The student MUST have at least one current LOR. However, this is a double-edged sword if the program is not supportive.

Applicants who change specialties more than once are at a disadvantage.

## WHAT ABOUT REPEAT APPLICANTS

Applicants who fail to match into radiology the first time around can be successful in matching in the next application cycle.

- For repeat radiology applicants, see <u>"I DIDN'T MATCH, WHAT SHOULD I</u> <u>DO?</u>"
- If you are applying into radiology after failing to match into another specialty, you MUST convince program directors that you are sincere and sure of your new choice. If radiology is just a fall back because it seems easy, program directors will see through that.
  - Try to get a radiology elective your last month or two of medical school.
  - If you matched into internship: Ask your internship coordinator if you can do a radiology elective EARLY, either at your internship institution or at your medical school program as an "away". For the latter, you will need to contact the radiology residency program director and/or radiology advisor at your medical school ASAP for approval and to help facilitate – especially if your dates don't align with the medical school rotation schedule.

# HOW TO APPLY FOR A RADIOLOGY RESIDENCY

#### PERSONAL STATEMENT

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These resources, most of which offer opinions based on years of observation and experience are in the end subjective editorialized opinions and do not necessarily reflect official policy or AUR/AMSER's stances:

- BeMo's Ultimate Guide to Residency Personal Statements: How to Write Compelling Statements Even If You are Not a Natural Writer
- <u>APPS of STEEL</u> on Teamrads.com

Being mainstream and "safe" here is OK but make it personal and engaging.

- Have a lot of people read it, including those who read a lot of them
  - ° Friends and family
  - <sup>o</sup> Advisors in student affairs
  - ° Radiology faculty advisor
- Basic language skills are required: SOUND LITERATE
  - It should be readable with short sentences and no spelling/grammatical errors, no factual errors
  - <sup>°</sup> Proofread well don't trust spell-check
  - <sup>°</sup> It should be concise & coherent
  - <sup>o</sup> No more than one page, <sup>3</sup>/<sub>4</sub> is fine. A paragraph is too short!
  - ° Original & eloquent is welcome, but less important
- Being interesting and witty, with a "hook" to draw the reader in, is of course desirable.
- Don't assume it will get read but make the first couple sentences good in case it does. Not all programs read them at the initial ERAS review stage.
- Keep in mind that someone skimming the statement may read only the first line of each paragraph.
- It can be based on one or more stories that illustrate your life. You want to sell yourself and show personality.
- ERAS will allow you to select a different personal statement for each program.
  - It will increase your odds of getting an interview at certain locations, if you include a few lines on why you want to go to the area or to a specific program – i.e., family lives there, significant other is there/going there, grew up there, want to live there in the future, etc., why a New Yorker might go to Texas or vice

versa. The Supplemental application may replace this but will be new for 2023.

 BE CAREFUL – don't send the wrong statement to the wrong program.

## WHAT TO WRITE ABOUT:

Your essay puts a face on the applicant.

Cast yourself in the most flattering light while being honest – be humble yet assertive.

- Things that do not appear elsewhere on your application.
- Something interesting about yourself or your background that we can talk about at interviews.
- What attracts you to radiology? Make this short the readers already know the "pros" of radiology!
- What you intend to do in radiology.
- What you can bring to the program e.g., special skills.
- Something outstanding from undergraduate years or outside interest, e.g., Olympic swimmer.
- Programs want applicants who want to come to their program to stay there, so you can make this clear.
- If you have clearly changed career paths, explain why.
- If you have low scores and have a valid reason, explain why, as this will most probably be asked in the interview. If you think you do not have a strong reason to validate, it is preferable not to include in the statement as this can also be detrimental to your interview.
- Problems to address "odd things" in application years out of medical school, prior residencies (why are you changing), etc.
  - If you are changing residencies specifically, have concrete reasons why you know now that radiology is the right fit for you. Show that you have done your homework either by participating in research projects and/or by shadowing radiologists and that you know what working in radiology entails. Don't just use generic phrases like "I enjoyed going to the reading room during my "\_\_\_\_" residency and that's how I know that radiology is for me."

#### <u>DON'T:</u>

- Put anything in that you can't/don't want to talk about at interviews. Anything that you put in your application is fair game for interview material!
- Mention your love of photography or puzzles.
- Tell us you are a "visual learner."
- Make your personal statement weird do not stand out in a bad way.

• Sound pompous, arrogant, or tactless.

## NEVER LIE!

#### Can a personal statement be too short?

Although we say that you should keep your essay short, this is an example of (a real but anonymous) personal statement that is a tad too short:

"When I was trying to decide which specialty to apply to, I asked various physicians how they had chosen their medical specialty. Some described having an initial interest in several specialties, then deducing the best fit for their personality. Others related a personal experience that had directed them toward a specialty. A single respondent stated, "It wasn't a choice. I just knew." Like the latter respondent, I just know. I know who I am. I know what I do well. I know what I do poorly. And I know that I am a radiologist."

Personal statements are preferably kept within one-page length; however, it is advisable to not be shorter than 3 paragraphs.

An example outline could be:

• First paragraph: The most important paragraph that grabs the attention of the reviewer, so do your best to make it unique and catchy.

Some prefer to start with a storytelling pattern.

- Second paragraph: Focus on the reason why you chose radiology.
- Third paragraph: Focus on your strengths and personality attributes you will bring to the program and radiology, why a program should choose you, and why you are specifically interested in that program if you are creating a customized statement for your top choice program.
- Final paragraph: Plans and aspirations after completing residency training.

## LETTERS OF REFERENCE

- Highly recommended to use the Association of University Radiologists (AUR) Standardized Letter of Recommendation (<u>https://www.aur.org/resources/standardized-letter-recommendation</u>) when submitting letters of recommendations to diagnostic or interventional radiology residency programs.
- Plan to get 4 letters of reference.

- You can submit up to 4 letters/program.
   Plan on 4 so if one writer doesn't get it done, you have a backup letter.
- ° You can submit different letters to different programs but be careful.
- Submit 3 letters, the 4th is optional:
  - ° 2 from core clerkships these are generally more important than radiology letters, as students play a more active role in the nonradiology core clerkships than in a radiology rotation.
  - 1 from clinical radiology clerkships this could be from a radiology faculty that you worked with during the general radiology clerkship or a subspecialty radiology clerkship.
  - <sup>o</sup> The fourth is optional, however recommended. It could be from an additional radiology faculty or research faculty. Because of the intimate nature of the radiology community, the interviewers may see a letter from someone they know and respect, which will especially mean a lot. Research faculty may be important if applying to research heavy academic programs.
  - Ensure the letter writers know the specialty for which their letter is meant. For example, letters for preliminary and categorical programs can sometimes be confused and will be brought up during the interview.
- Get the letters from someone who knows you well enough to talk about your personal and professional strengths.
  - <sup>o</sup> It's best if they offer an unsolicited letter, but you can scout out if they think well of you. For example, if they write glowing comments on evaluations such as "I wish the candidate were going into my specialty," it's likely they'll write you a strong letter.
  - It is not important to get a letter from a "big name," but if a "big name" knows you well enough to write a genuine and personal letter, it does not hurt. Usually, the department chair will not know you well enough to write a personal letter and that will show in the superficiality of the letter.
  - If your first-choice program is of highest priority for geographic or other reasons, you could request your letter writer to have specifically addressed letters be sent to the programs which can carry more weight.

## TIMELINE FOR LETTERS OF RECOMMENDATION

For letters that are based on your clinical rotation performance, you may want to ask your clinical preceptor for a letter of recommendation while your performance is still fresh in the minds of the letter writer – it will make for a more personal letter, hopefully with relevant anecdotes. Provide your letter-writer with your current CV and transcript.

For faculty that have known you for a significant period of time (e.g., radiology advisor, research mentor, etc.), you should reconnect with them by mid-June to update them (rotational experiences, research activity, evolving interests, etc.) and ask for a letter of recommendation. Provide your letter-writer with your current CV and transcript.

Don't ask for letters at the last minute – you may want to give the letter writer lots of time. These are ideally ready to submit at the same time as your ERAS application around the first week of September of year 4. Also, asking at the last minute suggests to the letter writer you may procrastinate or that you are disorganized. Ask the Radiology advisor if the Standard Letter of Recommendation (SLOR) should be forwarded to each LOR writer (This also is relatively new and not yet mandatory).

How to go about asking for a letter of recommendation:

- Approach first by email asking whether the individual can write a *strong* letter of recommendation. If the individual agrees, offer to meet to discuss your career interests, rotational experiences, research activity, and other interests outside medicine. Provide your CV, transcript, personal statement, any evaluations you may think are helpful, and the ERAS Letter of Recommendation Request.
- Leave them wiggle-room to refuse and look for cues when you meet with them that make you sense they are not interested in/ able to write a strong letter of recommendation.

#### By end of mid-July:

- You should have asked faculty for letters by now and be sure to check if they are able to do it by the first week of September.
- Now it is obligatory to upload letters of recommendation through the <u>Letter of</u>
   <u>Recommendation Portal (LoRP)</u>
  - All letters of recommendation must be uploaded by the author or the author's designee using the LoRP. Medical schools will no longer be able to upload letters on an applicant's behalf.

## By Labor Day:

- Remind faculty gently if the letters are not submitted.
  - "I am so honored that you are writing a letter of reference. Just a reminder, my advisor insists my package be complete by the first week of September. Please feel free to contact me if you have any questions or need more information to assist you in completing my letter."
  - NOTE: You can and should submit your application by the first week of September, but your letters do not have to be in by that date. You will indicate on your applications from whom they should expect letters.
- Ask your student affairs office to double-check for mistakes on the letters, including your name/sex and that the correct residency program is stated that is, radiology, not e.g., orthopedic surgery.

## SOCIAL NETWORKING SITES

Social media platforms have emerged as digital residency recruitment hubs, serving as virtual environments for programs and applicants to share and learn information as well as connect with each other before, during, and after recruitment season. Although many residency programs use more than one social media application, Twitter has emerged as a primary platform for both programs and applicants.

- It is most prudent to stay cyber squeaky clean and to remove any compromising photos. Avoid any content relating to alcohol, drugs, sex, politics, or dubious judgement.
- Social media, such as Twitter, can be used strategically to highlight your accomplishments and to communicate your personal brand.
- There is a vibrant radiology community on Twitter for which applicants can get information of virtual open houses offered by residency programs, connect with program directors, as well learn of potential leadership and mentorship opportunities.
- Below is a menu of Twitter handles that may be useful. These Twitter sites are not validated or endorsed by AMSER or AUR and are the opinion of others. The goal is to offer potentially helpful resources, with an understanding that the information and application process is ever changing.
  - The American College of Radiology (ACR) Resident, Fellow, and Student (RFS) Section: @ACRRFS
  - ° AMSER: @AMSERRads

- <sup>o</sup> American Association for Women in Radiology (AAWR): @AAWR\_org
- <sup>°</sup> Future Radiology Residents: @futureradres
- <sup>°</sup> Radiology Student Interest Group: @RadiologySIG
- Most radiology residencies will also have an active Instagram account that you should consider following, especially if you are interviewing at that program. They may post announcements for events during the interview season and their posts can also provide you with insight into interactions between residents and the personality of a program, especially in the setting of virtual interviews. However, keep in mind that this is their own curated page. This page may also provide you with information about their wellness activities, which can be mentioned during your interview day to show that you have done your homework and how you may fit into a program ("I really enjoyed seeing that you held a pet event at the park last year, that's something that I would be interested to participate in with my dog.") Direct messaging programs is possible, though not necessarily recommended on this platform. As always, all interactions must be professional and respectful.

#### **ONLINE FORUMS**

Be careful with forums such as Aunt Minnie, Student Doctor Network, and Reddit.

There is a lot of bias and misinformation on these sites. Some anonymous applicants might talk down a program to get others to rank it lower, hoping for a better chance to match. Also, people from the programs may skim these sites, so something you write on them may come back to haunt you. That said, some advantages to looking at these forums include finding out when residencies are releasing interview invitations, when other applicants cancel interviews, and if there are other applicants trying to swap interview dates.

If you have questions about the application process, it is recommended that you not rely exclusively or even primarily on online forums to guide your decision-making. Direct communications with your advisors, local faculty, and programs are the gold standard for information gathering.

## ELECTRONIC RESIDENCY APPLICATION SYSTEM (ERAS) NATIONAL RESIDENT MATCHING PROGRAM (NRMP)

#### HOW DO I APPLY?

- The <u>Electronic Residency Application system (ERAS)</u> is the central application for residency.
- You create one application online and submit it to as many programs as you want.
- The more programs you apply to, the more expensive it is. Think of this as an investment.
- Complete your application by the first week of September opening date to maximize your chances.
- Programs start reviewing applications as soon as they arrive so you have the best chance of an interview if you apply early.
- The <u>National Resident Matching Program (NRMP</u>) is a private, notfor-profit corporation established in 1952 to provide a uniform date of appointment to positions in graduate medical education (GME) in the United States.
- Applicants need to register both with ERAS and NRMP.

#### WHEN DO I HEAR FROM PROGRAMS?

- The majority of interviews are offered after the programs receive the Medical Student Performance Evaluation, which is released to them by ERAS on October 1.
- You will start hearing from programs via email in October or even earlier, with the majority responding between mid-October and January. (see "TIMELINE" Fourth year of Medical School section). Check email OFTEN!

#### THE MyERAS<sup>®</sup> APPLICATION

- There are new changes to the MyERAS<sup>®</sup> application for the 2023-2024 application cycle. These changes include updates to the experiences section, geographic preferences, program signaling, and a new impactful experiences section.
- The MyERAS<sup>®</sup> application is to help students share more information about themselves and their medical education journey. It also helps programs better identify applicants who are **genuinely interested in**

**their program** and whose interests and experiences align well with the program's setting, mission, and goals.

- Components of the MyERAS<sup>®</sup> application:
  - ° Experiences section
    - Identify a maximum of 10 experiences (previously unlimited) and up to 3 meaningful experiences from the following categories:
      - Work
      - Research
      - Volunteer [Do not add any volunteer or extracurricular activity that is not real as you might be asked about during the interview and can act against you if found fake]
      - Education/Training
      - Military Service
      - Professional Organization
      - Teaching/Mentoring
      - Hobbies
    - Designate a Primary Focus Area to each experience
    - Identify a Key Characteristic associated with each experience
    - Describe the context, roles, and responsibilities (up to 1,020 characters)
    - Identify up to 3 especially meaningful experiences and why (up to 300 characters)
  - <sup>°</sup> Impactful experiences
    - The impactful experiences prompt is identical from the 2022-2023 ERAS<sup>®</sup> Supplemental Application, but now has its own section in the MyERAS<sup>®</sup> application.
  - <sup>°</sup> Geographic preference
    - Applicants have an opportunity to communicate regional preference(s), now using standardized fields across the application.
      - Select **up to 3 of the 9** U.S. Census divisions and share information and short explanation (up to 300 characters)



- Section **"No region preference"** and short explanation (up to 300 characters)
- Select "Do not wish to communicate a preference"
- Applicants have an opportunity to communicate urban and rural setting preference(s) separately and share a short explanation.
- ° Program signals specific for Radiology
  - Signals to diagnostic radiology (DR) and Interventional radiology (IR)/DR will be combined.
  - Applicants will be given up to 12 signals total.
    - 6 gold
    - 6 silver
  - **Gold** signals designate your "most preferred" programs
  - •. **Silver** signals designate your "preferred" programs
  - Signals are appropriate to use in the interview offer phase only
  - Signals are only seen by programs you signal
  - It is recommended to use the maximum allotted signals per specialty
  - Applicants should signal programs they are most interested in – This includes home and away rotation programs
  - Based on prior year data, sending signals results in a higher probability of interview invitation, however, sending a signal does not guarantee an interview invitation

- Not every program participates and programs use signals in different ways
  - Programs may use signals as a screening tool
  - Some may use as a tiebraker to help decide who to interview
- Cannot send signals for individual tracks
- Code of conduct
  - Programs shall NOT ask interviewees where they have signaled
  - Programs shall NOT disclose the number of signals they have received
- Be prepared to answer why you signaled a program in an interview

TO HOW MANY PROGRAMS AND WHERE SHOULD I APPLY?

#### HOW MANY PROGRAMS?

Obviously, this depends on the student but there are trends and suggestions to consider.

- In the 2021-2022 DR interview season, U.S. medical graduate applied to an average of 66 programs and international medical graduates applied to an average of 64 programs.
- In the 2021-2022 IR/DR interview season, U.S. medical graduates applied to an average of 39 IR/DR programs and international medical graduates applied to an average of average of 25 IR/DR programs
- It is a numbers game, and you want to maximize your chances of matching.
- The Interventional Radiology (IR) residency program is EXTREMELY competitive, more than Plastic Surgery and Orthopedic Surgery when you consider the number of applicants to number of spots. If you absolutely want to do Interventional Radiology, you might need to apply to almost every program. Interview at all the programs offered and rank all the programs you interviewed with.
- Most students applying to IR residency will apply to BOTH IR and DR programs, because positions for IR residency are limited which means it is EXTREMELY competitive. There is a good chance for not matching IR residency but at least those applicants will match into DR residency and still have the opportunity to do IR through ESIR or Independent IR residency.

- If you are selected for IR residency interview at a program, you are often also selected for DR residency interview at the same program. The reverse is not true. Some programs interview for both residencies on the same day and some programs require you to come back separately for IR residency interviews.
- You know where you stand based on how competitive you are, and what kind of program you are interested in matching at. If you are more competitive, you may be able to apply to fewer programs. Unfortunately, geography counts, so students from more competitive regions should apply to more places. *For some people it may be 15 programs (for DR)* while others may want to apply to 50.
- One should apply to as many programs as you think you need to be able to get at least 10 to 12 interviews.
- IMGs generally need to apply to more programs compared to U.S. graduates, but with a similar goal of landing at least 10-12 interviews.
- If you applied to "too many" programs, you could always decline the interview offers.
- It can be expensive if in-person interviewing resumes but think of applying for residency as part of the investment in your education.
- You do not want to be in the position of having to SOAP (Supplemental Offer and Acceptance Program) into a position after not matching. The last few years, the unfilled radiology spots were very competitive and went to unmatched very strong students who didn't match into dermatology, orthopedics, plastic surgery, etc. (See: <u>"I DIDN'T MATCH WHAT SHOULD I DO?"</u>). In 2023, there were no DR and no IR positions in the SOAP.

## WHERE TO APPLY?

## Generally:

- Academic programs at large universities are more competitive than smaller community programs.
- Larger programs may have more didactic teaching, but you may get less responsibility and "hands on" experience due to larger numbers of fellows.
- Larger programs may offer more research opportunities. Medium-sized programs may have more hands-on opportunities.
- Some community programs may have less didactic faculty teaching.
- That said, there are wonderful programs, world-class teachers and mentors, and gratifyingly affordable lifestyles waiting in unexpected places.

Also remember that even with only minimal resources, you can teach yourself anything.

- It is best to know what you are looking for in a program (size, personality, activities outside of the hospital) and have honest conversations with current residents about how different areas may be able to offer that to you. Remember that you are going to be spending at least 4 years at the program that you match into- you want to make sure that you will be happy by finding the best fit for you!
- Before applying to the list of programs, it is a good idea to make a spreadsheet of the programs with their highlights like geographic location, score requirement, research opportunities, and other perks. Most of the general information is available on the FREIDA website including the visa status required/ sponsored by the programs which is important information for IMGs. This worksheet can be updated after the interview process and might help you during the ranking process by reminding you about what you liked about the program since it might be a couple of months between the interview and ranking process.

# Apply broadly to a combination of programs with the goal of obtaining at least 10 to 12 interviews for DR and as many possible for IR.

- Apply to a range of programs (reach, middle tier target, less competitive) and spread your net wide geographically and apply off the beaten trail.
- It's best to apply to a broad range of programs in a limited number of geographic locations that you like.
- If you have a special connection to a region or city, consider mentioning it in your personal statement to programs in that region. You can upload multiple versions of your personal statement in ERAS but only submit one per program.
- Some regions are very competitive (see below). Location is a strong driving factor in the competitiveness of a program, sometimes more than the quality of the program itself.

# How do I know if a program is university, university-affiliated or community?

Search for individual programs here: FREIDA Online

# There are "unofficial" rankings of diagnostic radiology residency programs:

Doximity Residency Program Ranking

Aunt Minnie Minnies 2022 – Best Radiologist Training Program

For additional information, please review <u>How to choose residency programs that</u> <u>best fit</u>

## COUPLES MATCH

- Couples matching makes the process much more difficult.
- You both must apply to more programs than you would as an individual. Again, it is a numbers game.
- Shoot for regions where there is a lot of overlap and where there are a lot of programs.
- If one of you gets an interview at an institution or area and the other does not, communicate with those programs to let them know about your situation.
- Both people are <u>regular NRMP matches</u>: Make paired rank lists.
- If one person is <u>an early match</u> (ophthalmology, urology, etc.):
  - The good news is the early match results come out before the regular match rank deadline.
  - <sup>o</sup> The key is once again communication with the programs in the area. Let them know the situation instantly – i.e., that you are ranking them number 1 (if you are) or that you will be ranking the programs in the area highly.
- For additional information, please review <u>Navigating the Match as a</u> <u>Couple</u>

## WHEN CAN YOU CONTACT A PROGRAM DIRECTLY?

Communicate! But not too much! Be careful - do not annoy the program coordinator or director. Times you might consider contacting the program director and/or the coordinator:

- After you apply, but before you get an interview to show your interest. You can do this as early as late October or early November if others have gotten interviews at the program – especially if you think you are competitive for the program, and if you are really interested in the particular program, and it isn't obvious.
- 2. If you have not heard about an interview and it is late in the interview season, or you got a rejection.
- 3. If you have updates to your CV.

- 4. After you interview your "thank you note" or "I really loved your program" letter (see <u>"SHOULD I SEND THANK YOU NOTES</u> <u>AFTER INTERVIEWING?</u>" section)
- 5. At the end of the interview season, before programs put in their final rankings for applicants.

#### EMAIL ETIQUETTE IN BUSINESS COMMUNICATIONS:

- Headers are important succinct summary of what the recipient will find within.
  - e.g., "Update to Application for Radiology Residency/----- MSIV"
- Absence of a header/ subject line may lead to deletion by the viralcautious.
- Use professional format and phrasing.
- Do not address Program Director OR Program Coordinators by first name.
- Use an appropriate, identifiable email name.
- Make sure your contact information is there like email and telephone(s) have a signature block

## WHEN YOU DON'T GET AN INTERVIEW:

Don't take this personally. Programs receive hundreds of applications for a few positions. Programs interview between 10 and 25 students per spot available.

• They are looking for reasons NOT to interview, and these may be fairly superficial, especially towards the end of the application season.

## **CONTACTING PROGRAMS:**

#### Correspondence with programs IS THE KEY to success!

- Programs want applicants who are interested in their program and did not just apply there because it was another easy click on ERAS.
- Remember, they only choose 100 out of over 500 applications for an interview so be proactive and show your interest.
- Programs want happy residents who don't transfer after 1 or 2 years to the place they really wanted to be.

#### Which programs to contact:

- Choose your top programs e.g., your top 10.
- Programs you haven't heard from.
- Programs that have sent you a rejection.
  - Try these only if you are realistically competitive at and obsessed with a particular program/locale - some initially

excluded students have gotten interviews and matched at programs this way.

#### Who to contact:

• 99% of the time, contact the program coordinator, and cc the program director, (their contact information is listed either on the program website or on ERAS).

#### How to contact:

- Do not be annoying.
- Brief, professional, articulate email or phone call reiterating your interest.
- Email is better: You have more control it is more difficult to mess up.
- Phone call a pleasant call to a coordinator can be more personal, but...
  - You may have to rehearse what you will say.
  - If you call when he or she is busy, it could be annoying.
  - Cell phone calls may be hard to hear. Consider landlines.
  - The call may be forgotten/the program director may never get notice of your inquiry.
  - Information may not be correctly conveyed.

## What to say:

- Tell the program you are interested in them, and you would love to have the opportunity to interview with them.
- Tell them about <u>why</u> you are interested in <u>their</u> program.
  - <sup>o</sup> This is particularly important if you are applying to a markedly different geographical area, i.e., Grew up there? Spouse job opportunities? Couples matching? Have children and need to stay in a specific area? Or specific details about their program and why you like it.
  - "I would love to do residency in an area I have never lived before" is absolutely appropriate, but it doesn't carry as much weight as "I have family in the area."
  - Program directors know that most applicants match in areas where they have a family connection or in the region they attend medical school.
- You could send selected data, but keep it VERY BRIEF, just enough to catch their interest. e.g., your medical school, grades, board scores, AOA/awards, publications, updates, etc.
- It is prudent to include the AAMC or NRMP ID in the email communication

so it is easy to add note to your application in case the program wants to refer to your application following your email.

NOTE: Don't be offended if the program directors do not reply - they get hundreds of emails from students.

#### A common e-mail could read:

Dear Dr. ...

I'm a fourth-year student at \_\_\_\_\_\_ Medical School. I'd like to reiterate my interest in your program and I hope that you'll consider me for an interview. (If you've been rejected, write "I'd like to reiterate my interest in your program and ask if you'd reconsider my application for an interview.") I am particularly interested in your program because (...my family lives in the area/I have heard outstanding reports of your program from a radiologist at my institution/I love the outdoors and wish to move to a rural area...etc.)

After that---you could include a short paragraph with a few facts – grades, updates, etc. – 2-3 sentences at most.

Thank you for your time. Your Name \_\_\_\_\_Medical School Class of 20XX Good professional address Reliable phone number

## **INTERN YEAR**

The majority of diagnostic radiology residents choose to do a preliminary medicine year or transitional year for internship, with surgery as a strong second choice. For IR, surgery is suggested. However, almost all specialties including pediatrics, emergency medicine, and obstetrics/gynecology can be considered a preliminary year.

## Transitional years:

There are few programs, so these are the most competitive.

- In general, offers more flexible schedule and electives than preliminary medicine or surgery. Work hours are usually less than the other two options.
- Most are located at community hospitals.
- Variable look up the details for each program.

- VERY COMPETITIVE because Dermatology, Ophthalmology, Radiation Oncology, and Anesthesiology applicants also apply for these.
- If you are applying to transitional year, you should also apply to preliminary medicine programs for backup. These interviews are hard to get and matching is also difficult.

## Preliminary medicine:

Most residents do medicine.

- Some are flexible and offer various elective options.
- Your schedule will be like an internal medicine PGY-1 resident with usually 2 ICU, 2 electives which can be radiology, and other IM rotations.

#### Preliminary surgery:

These are less competitive, but often required for IR residency, sometimes at the same institution.

- It may be an advantage for radiology as you learn anatomy and procedures.
- Try a less busy program that has less "scut" and more hands-on work to learn the "what & how."
- Since these may be less competitive, if location is paramount to you, this gives you the best chance of getting your top location.

## Why do I have to go on twice as many interviews?

- As a radiology applicant you must apply, interview, and rank separately for the intern year (PGY 1) and your advanced (PGY 2-5) radiology years unless you match into a categorical (PGY 1-5) radiology program (small minority of programs).
- If interested in IR training, you will likely have to interview for both DR and IR residency. Programs that offer both will often interview you for both on the same day for instance, morning for the DR program, afternoon for the IR program.
- It is easier to match into preliminary medicine and surgery than into radiology so applying to 8-10 should suffice unless you pick very competitive locations (Boston, Manhattan, California, and Seattle).
   Consider applying to local programs affiliated with or familiar with your medical school to increase your chances of matching. However, if you want to have options for a prelim year then take that application seriously as well.

- Though the intern year is easier than the advanced radiology residency matching, there have been situations where the students have matched into radiology but not for the intern year. In such situations, students try to scramble through the SOAP process. If still unsuccessful, they usually have time until the end of June to try to match into any unfilled program in the country. If still not matched into the intern year, they will have to forfeit their radiology matched program as they cannot proceed without an intern year. Hence, taking the intern year application process seriously is advisable.
- Don't count on unfilled positions to scramble into as they are becoming less common. (See: <u>"MATCH WEEK!</u>" section)
- The majority of programs you interview at for radiology are for advanced positions and do not include the intern year.
- Some programs do include the intern year, which you do not need to interview for separately.
- Some radiology programs offer an intern year at the same institution (with same day interview) but you have to rank and match them separately.
- Other programs let you rank them for both their advanced positions and for their categorical positions (this will be 2 separate entries on your rank list).

# As you're applying, you have to decide what is important for you regarding intern year.

- Do you want to be in a specific location, such as in the same area as your radiology residency, which will likely reduce the number of times that you will have to move?
- Do you want a less intense year with minimal floor months?
- Do you want to get intense training?
- Do you want to be in Hawaii for a year?

## SO YOU GOT THE INTERVIEW, NOW WHAT?

SCHEDULING INTERVIEWS

• Due to the COVID-19 pandemic and statements issued from the Association of American Medical Colleges (AAMC) and Coalition for Physician Accountability, most residency and fellowship programs

adopted online interactive virtual interviews in the 2020-2021 and continued in the 2021-2022 and 2022-2023 interview cycles.

- In 2023 the AAMC again issued a statement recommending programs continue to use a virtual interview format moving forward. The recommendation was based on the following ideas:
  - Virtual interviewing improves equity by eliminating cost of application (travel, etc.)
  - Opens opportunities for applicants that may have otherwise declined an interview due to financial constraints
    - Relative ease of scheduling virtual interviews
    - Reducing time away from clinical rotations
  - ° Reducing applicant stress and anxiety
  - Increased number of faculty willing to participate in the interviewing process due to reduced time commitment
  - ° IMPROVED SCHEDULING FLEXIBILITY
  - ° Virtual interviewing is more environmentally responsible.

Candidates are generally offered a select few days to interview on a first response first serve basis.

- **Respond to interview offers ASAP.** Do not put off signing up for an interview while you are waiting to hear from another program. Interview spots often fill up within hours of being sent out. Consider setting up an ERAS-only email account with push notifications (so that you know those notifications are related to residency applications) and/or linking this email account to a pager so that you can reply as quickly as possible.
- Do a preliminary year interview first, or a school destined to be low on your list. If possible, do the ones you care about in December or January you have more practice, and they remember you more for when they rank their list.

## CANCELLING INTERVIEWS

- Canceling interviews is ok, and common towards the end of the interview season. But you MUST contact the program.
  - Not turning up is VERY BAD and will get both communicated and remembered later...
  - Program and student directors get together annually and have long memories.

- Try to avoid last minute cancellations. You may be preventing another student from an interview.
  - But even if it is last minute, it is courteous and respectful to let the program know you are not coming, and it is possible that the spot still can be offered to someone else.

Last minute cancellations due to personal reasons (sick family members, etc.) are ok– program directors and coordinators understand that applicants have personal lives and that there is more going on than just applications! Again, always communicate with the program and if you are still interested in interviewing at that program, let them know and ask if it is possible to fit you in on another day.

It is a small world - not acting professionally gets around!

## PREPARATION

- Practice virtual interviewing.
- If there are workshops at school, attend these.
- Arrange for a dress-rehearsal mock virtual interview with a faculty member you don't know.
- Find out <u>exactly</u> what time your interview day begins (keep in mind of the time zone) and plan to log in at least 5 minutes early to give yourself time to troubleshoot any connection issues.
- You can ask the program coordinator what to expect. You also can typically check your interview day schedule in advance (can log into Thalamus if they are using this platform; if Zoom is being used, a PDF with your schedule will often be sent out beforehand).
- You may have anywhere between 2 and 9 interviews. Some programs do "speed interviewing" (5 to 6 10-minute interviews).
- Look up information about the program and your interviewers on their website.
  - Lack of knowledge about the program and the use of only generic questions are a turn off.
  - <sup>°</sup> Looking up information shows that you are interested, resourceful, and unafraid of doing a little bit of work.
  - Write down specific questions on your portfolio pad. During the interview you can refer to the questions and show the preparations you've made.

- So, then, during the interview you can focus more on if you like the place or not based on things that can't be found on the website.
- It is important to have at least 2-3 specific questions ready to ask the interviewer in case your conversation ends before the allotted time. Do your homework, look up the program, learn about the unique aspects of the program, come up with questions related to the interviewing faculty member's subspeciality or work/publication etc. (you will receive a list of interviewing faculty names before the interview date) rather than asking generic questions. This will also show your interest in the program. There might be situations and times where you might run out of questions or might have already been answered by the program members during the introduction. In such cases and when you don't have any more questions, but the interviewer asks if you have any questions, you can answer by saying "My questions were already answered by the previous interviewers in detail, and I thank you for giving me the time and opportunity to make sure all my questions are answered".
- You can send new information/updates and/or bring it to the interview: New research, AOA election, brilliant Step 2 scores (see "When you can contact a program directly" section). If you have updates after the interview, send them also.
- Know everything on your application including exactly what each research project was. Also be able to speak knowledgeably about the hobbies that you've listed! You should be able to carry on a conversation about your research and your hobbies that goes deeper than just surface level with any interviewer that may know something about these areas.
- Dress neatly and conservatively (hopefully the same as in your picture). They should think you know the unwritten rules. Clothing doesn't have to be all black: a little color is okay, such as an interesting blouse or tie.
  - ° Avoid trendy fashions.
  - <sup>°</sup> Not too short a skirt—you don't want to be tugging at it.
  - Clean hands and fingernails (consider removing all nail polish or making conservative choice).
  - <sup>°</sup> Limit external ornamentation.

## VIRTUAL INTERVIEW SETUP AND ENVIRONMENT

#### SETUP:

- You will need a quiet area with a fast and reliable internet connection to do your virtual interviews to avoid lag in the conversation during the interview. If your living space is noisy and not suitable for residency interviews, some people have done their interviews at their medical school in a personal study room. If you plan to do this, be sure that the space you intend to use is going to be available.
- Test your computer in advance to make sure that both the camera and the microphone are functional. If they are not, it is likely worthwhile to invest in a new computer at this time to use for both interview season, residency, and beyond. Virtual communications are here to stay.
- Make sure your computer is fully charged or, even better, connected to a power source. You do not want to lose connection in the middle of the interview.
- Set up your computer ideally around your eye level, about 2 feet from you with your face centered within the field of view. Ensure good lighting—some people have found that investing in a ring light (easily obtainable on Amazon) is helpful, but this may not be necessary for your particular interview space. Different camera angles (especially an extreme angle from below combined with poor lighting) can sometimes be very distracting for interviewers and will detract from the content of your interview.
- If you have notes written on your desktop or a second monitor screen, avoid looking at them/ scrolling while doing the interview as it might look like you are not paying attention to the interviewer. It is advisable to have notes on a paper pad during the interview and ideally make notes after the session is over.
- Ensure your background is professional appearing. This can mean a variety of things, ranging anywhere from a blank wall to tasteful, simple pictures or plants behind you or even using the background blur function on the video chat platform. Regardless of what you choose, make sure it is reproducible (as not all institutions will use the same platform) and not too distracting.
- If you have pets, we would recommend putting them in another room unless they are extremely well behaved and quiet. If your pet DOES end up interrupting one of your interviews, it's probably best to acknowledge this and explain to your interviewer VERY briefly (i.e., "Sorry, my cat got out and is rubbing its head against my leg."). Otherwise, your looking

down at your pet may be interpreted by your interviewer as disinterest in the conversation or you being unable to carry the conversation and referencing notes outside of the camera's field of view.

• Log in to the virtual interview at least 5 minutes early to make sure there are not any technical issues.

#### INTERVIEW DAY ETIQUETTE:

There will be a lot of overlap between in-person and virtual interviewing etiquette. However, there are some unique areas, outlined below:

- Clothing: Wear what you normally would wear for an in-person interview, including pants for men. Some applicants in the past felt that since only their upper half was visible, pants were not necessary, but if you get up while your camera is still on for some reason, which others have done, you will not make a good impression. Depending on how egregious the exposure was, you may end up not getting ranked by that program, and again, programs talk to each other. Best to not take that risk and just wear your entire outfit.
- Open chat rooms: Most programs will have a chat room open throughout the interview day staffed by residents. You should always stop in with at least one question, since even though these are listed as being optional, programs take note of who is attending what events and may view a lack of attendance at an optional event as disinterest on your part. That being said, there is a balance and you should not overstay your welcome in that room. If you have had your questions answered, there is nothing else that you want to discuss, and the conversation feels like it's wrapping up, thank the resident for their time and leave the room. If you are still having a lively conversation with the resident though, feel free to stay! This is a good time to evaluate whether or not you think you would fit in with the personality of the residents at the program. The moral of the story here is to clearly demonstrate your interest in the program while also reading social cues to interact appropriately with the resident(s) manning the chat room.
- Do your best to maintain eye contact. This is just as, if not even more, important for virtual interviewing as compared to in-person interviewing, since the interviewer cannot tell what you are breaking eye contact to look at when virtual.
- Do not end your interview early. This goes for both in-person and virtual, but it does not come off well if the interviewee abruptly ends an interview before it is scheduled to end. However, you should be cognizant of the time and your schedule so that you do not run over into the time allotted for your following interview. If this happens, tell your interviewer "I've really

enjoyed our conversation, but unfortunately, I think that we've used up all of our time and I'm scheduled for another interview in a couple of minutes." Thank them for their time.

• The interview season can be long and grueling, especially when interviewing for preliminary and categorical positions separately. Despite this, it is critical for you to maintain your energy throughout, as a lack of engagement, even if due to interview fatigue, will inevitably be noticed.

Backup/ Troubleshooting:

- Have your phone on silent but easily available to you. Video chats are reasonably reliable but will never be 100%. Sometimes it will be necessary to convert your video interview to a phone interview, and sometimes you will need to dial in to the video chat on your phone if the audio from the video chat is not functional. That being said, **DO NOT** allow your phone to become a source of distraction for you. We recommend keeping it face down unless you need it.
- Make sure that you have the program coordinator's phone number in advance. If you are unable to connect to a video chat, try calling the phone number provided through the video chat platform. If you are still not able to reach anyone, call the program coordinator to see if he/she can connect you with your interviewer.
- Ensure that the phone number that you provided on your ERAS application is current and active– your interviewer may attempt to call your listed cell number if the video chat is not working.

## PRE-INTERVIEW MEET/GREETS:

The vast majority of programs will have these sessions before your interview day so that you will have the opportunity to virtually interact with the residents without faculty being present.

- Though these are technically optional, you should do your best to attend the events for all the programs that you are interested in. Programs will take note of who has and has not attended these events and may interpret a lack of attendance as a lack of interest. If you are unable to attend the event on the date that you are assigned, email the program coordinator to find out if there is another session that you can attend.
- Be personable with and have questions for the residents. Though this is not an official part of the interview day, programs will still ask their residents for input on applicants that they have encountered during these sessions. Applicants have both risen and fallen on the rank list based on these events.

- Maintain friendly interactions with all your fellow applicants. Not only will it look bad in the short term if you are confrontational with another applicant, but that person may end up being a co-resident in the not-todistant future and will also most likely be a future colleague in some capacity. Radiology is a small world, and you never want to burn bridges.
- Make sure you interact with the residents of the program and be friendly with your co-applicants. This will reflect your congeniality. Be respectful of the time and let others have time and opportunity to talk as well. Sometimes, a few candidates take up most of the allotted time leaving minimal to no time for other candidates who are not outspoken/ introverts. Try to be a team player/ good sport.
- There are a variety of platforms that may be used for these sessions. Do your best to be familiar with them so that you can focus on the interaction rather than navigating a chat room.
- This is one of your opportunities to interact with current residents and to see if you will fit in with the "personality" and "culture" of the program and its trainees. Make the most of it.
- You may or may not receive a gift card to be used for a meal during this session from the program.

## AT THE INTERVIEW:

Most find radiology interviews to be very friendly and mostly a get-to-know-you session. If you've made it to the interview the program is very interested in you and just wants to see what kind of a person you are.

Particularly in radiology, where you spend a lot of time sitting next to people in the reading room and interacting with clinicians and radiology personnel, they want to make sure you are the sort of person who is friendly, fun, honest, responsible and hard-working.

The easier the interaction during the interview, the better the outcome.

- From when you pull onto campus to the time you leave, you must be in interview mode.
  - <sup>°</sup> Even during lunch or just sitting around waiting, be appropriate and respectful.
  - <sup>o</sup> The non-medical staff can exercise astonishing veto power. No one wants a resident who may be rude to technologists, nurses, and secretaries in the future.
  - Coordinators also have the power to help you, so treat them well.

- YOU ARE NEVER "OFF THE RECORD." Sorry, but it's true.
- This is your time to shine you are trying to sell yourself, but do not come off as arrogant.
- Relax and enjoy yourself. Be yourself, act interested and be enthusiastic. Interviewers will notice.
- Don't fall asleep during the Chairman's presentation (yes, it's happened!).

#### Get a feel for the program.

- Are the residents happy? Do you have an opportunity to meet the residents?
- Some programs may try to "hide" their residents this is a warning sign!
- Do you feel comfortable during the interview day and in the area where hospital is located?
- Is it somewhere you would want to work and live?

#### QUESTIONS DURING INTERVIEWS:

Specific answers don't matter. Be prepared to be crisp, professional, and eloquent without sounding as if you pre-memorized every word. Use every opportunity you can to sell yourself to the program and to keep a conversation going. Never just respond with a "yes" or "no" answer even if asked a "yes" or "no" question.

## SMILE © !

Write notes right away to help you write thank you emails (if you do so) and especially during ranking the programs. Otherwise, the details of the programs will run together.

#### Common questions for the candidate:

- You must know and be able to answer questions about everything on your application. You will be amazed by what some interviewers pull out of your application and by what some don't seem to notice.
  - Most of the questions you will get are phrased like this:
    "I see on your application..." or "Tell me more about ..."
- Why did you apply here (second most common)?
- Tell me about yourself have a nice 4 to 5 sentence synopsis about YOU. Don't say, "What do you mean?" Decide ahead of time if you're going to talk about your life story, about academics, etc. Make it short and sweet – and interesting if possible.
- What particularly interests you about our program?
- What can I tell you about our program?

- What are you looking for in a program?
- Why radiology?
- If you couldn't do radiology, what would you do? Why didn't you do (your answer) anyway?
- What seminal papers has your letter writer written?
- What was your worst hospital experience?
- Tell me about a patient encounter... (be prepared to talk about a specific patient you interacted with and something you learned about this interaction; it does not have to be about a radiology patient. This question has been especially common in preliminary program interviews).
- Favorite organ system? Discuss imaging of that system.
- What do you think about the healthcare system?
- What are the challenges ahead for radiology?
- Read the papers during interview season be aware of what's going on.
- Where do you see yourself in 10 years?
- Tell me about your research.
- I notice you play...insert name of sport, instrument.
- What do you like to do for fun? You can say something that is not on your application. e.g., "I like to go fishing" but don't stop there.
- What was your biggest mistake?
- Describe a challenge you have surmounted.
- What was your one defining moment? What are you most proud of?
- Have you ever lost your temper in a clinical setting?
- What does it take to get you angry? Ever been in a fistfight?
- What are your strengths and weaknesses? Cliché, but you will definitely get this question. Prepare an example of each, and for your weakness, discuss how you are trying to improve it.
- What sets you apart from the other applicants?
- Tell me three things your best friend would say he/she liked about you. And didn't like.
- Tell me about a decision you've made in the last year.
- Tell me about a bad decision you've made.
- Tell me a joke (!!). Be careful.
- What was the last museum (theatre, movie, public park) you saw?
- What was the last/favorite book you read/movie you've seen? Be familiar with the claimed book.
- If you were an animal, which would you be?

- If you were a plant, what kind would you be?
- Or to show you a paper, coin, or toothpick mind-teaser ("Using only these 3 pennies, build a model of the Spaceship Enterprise...") or ask you to solve an odd puzzle question. And occasionally an interviewer just sits there, silent, to see your reaction...try not to babble.
- What do you think about healthcare reform? (Avoid political answers or taking sides).

There is simply no way to anticipate or prepare for some things. Should you freeze and flail, practice saying "I am sorry, I've never thought about that question. Let me think and then start talking again." And smile a lot.

- Where are we on your rank list?" (ILLEGAL!!! Be tactful and evasive e.g., "I am still putting a lot of thought into my list and I haven't finished interviewing yet")
- And of course, that great conversation-stopper: "**Do you have any questions for me?**" Make sure you do! See below.

#### Questions for the attending interviewer

It is crucial that you know about the program and have specific questions to ask. Research the program before you go and write a list of questions that you can ask. Don't let interviewers feel that you are just going through the motions or using them as a "safety" program. Don't be afraid to ask more than one person the same questions. Don't ask questions that were answered at general sessions unless you want clarification; it makes you look like you were not paying attention. Write questions down, it's ok to look at your notes.

- Has your new Chairman changed the department significantly? Are more changes to come?
- You have an animal MRI research lab. Can residents become involved in projects?
- What kind of equipment do you have? (but do the research first about what is available and what it means and what they have on the website already)
- Research opportunities? Is there protected time for research?
- How much didactic/case conference lectures are there? Is this time protected for the residents?
- Teaching responsibilities for the residents?
- How do you prepare your residents for the CORE exam?
- Do residents attend any review courses for the CORE exam?

- I see that you have 6 IR residents and fellows, how does this affect resident opportunities for hands-on training?
- What kind of attending backup is there on call?
- Any changes to the program in the future?
- Patient population? Not if this is obvious from the website or situation VA hospital, County hospital.
- Do residents rotate at other hospitals?
- I have 2 school age children, what are the schools like in the area?
- Real estate is very expensive locally, so where do the residents live?
- What makes a good radiology resident?
- What is a typical day for a radiology resident in your program?
- Where have the residents ended up for fellowship and what specialty? (if this information is not available on the program website)
- Moonlighting opportunities within the program?
- Is there research opportunities or support for research work in the program?
- Is mentoring available for residents interested in leadership roles?
- Educational funds for residents presenting at national or international conferences?
- Any outside rotations for residents? (e.g., pediatric radiology, AIRP, etc.)
- Core exam passing rate for the program?

## Questions for the residents (interviewers and others)

You may have resident interviews, and in between interviews you will have the chance to ask the residents about the program. Many programs hold dinners or lunches with the residents. They are your best source of information. Talk to younger residents as well because they are closest to where you will be and some of them will even be there when you start. Try to get a feel for the level of morale and general resident satisfaction with the program.

- What is call like? Night float or overnight call? How is the backup during call?
- What is the patient load like?
- Who gives the lectures? How do you like the didactics and teaching? Ability to attend conferences?
- What is the interaction like between the residents and attendings? How do you read out with the attendings?
- How prepared were you for the CORE exam?
- How much time did you get to study for the CORE exam?

- Faculty/resident ratio. Is there a lot of staff/resident turnover? Staff support?
- Do they get good hands-on experience?
- Wide variety of cases?
- Boards pass rates?
- Opportunities for fellowship? But you can go to another, more academic program for fellowship.
- What do you like about working here?
- What do you dislike?
- Benefits like meals, health insurance, vacation, pay, etc.?
- What are the social/family opportunities outside work?
- Housing costs? Where do residents live? Cost of living? What is the parking situation?
- Spouse work opportunities?
- Is moonlighting available (be careful, sometimes this is a "don't ask, don't tell" issue)?

For additional information, Interviewing residency programs

## INTERVIEWERS LIKES AND DISLIKES

The following are direct quotes from interviewers:

## Dislikes

- Having no questions to ask me.
- Asking me what are the strengths and weaknesses of my program. Who is interviewing who? Too general and standard a question.
- Having no knowledge of the program.
- I'm not a big fan of saying that the program looked good on the website as a reason for coming here. Makes it seem like you liked their pretty website-only! Specific reasons for choosing programs (size, location, heard about from somebody that works here) is advantageous.
- Inability to back up something they put on the application (e.g., concert level pianist who has only played at school concerts).
- When a medical student has already chosen their fellowship before they have done radiology.

- Don't overuse casual phrases dude, man, like, awesome, totally.
- Don't make a statement sound like a question: "I'm from California?"
- One-word, dead end answers to questions.
- Hedging.
- Nervous fiddling, playing with face or hair. Jiggling knees.
- Chewing gum.
- Very short skirts.
- Do the interview, and don't come back to talk to me again, unless there is a reason. I'm busy.
- Staring in a different direction than facing the camera.
- When the interviewer can see flashing lights in the candidates' eyeglasses which is probably from the candidate browsing some website or watching something else during the interview.
- Asking the interviewer what subspeciality they are in which indicates they have not done their basic homework for the interview.
- Low volume without mic where the interviewer needs to ask them repeatedly to speak again or louder.
- Candidate ending the conversation early and leaving the assigned room before the allotted time.
- Making fun of the program's residents whom they met at the meet and greet or pre interview dinner.
- If you follow up with me in some way, try to do it in a way that does not require me to respond. I don't want 50 new pen pals.

#### Likes

- Questions that show the student has prepared: looked at the website, talked to someone, thought about it e.g.,
  - <sup>o</sup> Location/geography "how does it affect case mix and potential experience?"
  - "The----- program looks interesting," and then asking specific questions about it, not just "Tell me about it," while I sit here and try to stay awake.
- Know something about the program, a few specific strengths even if from the program's web site, can show that you did your homework and are motivated to be a resident there.
- Just tell me about the issue/problem in medical school, the gap, the foreign school, the unusual employment history I'll find out anyway. It's better to own up and tell me what it taught you.
- Show enthusiasm both for radiology and for the program specifically, but don't overdo it.

- I want to see that they are excited by the practice of radiology not the lifestyle, money or even that their primary interest is the technology itself. I want to sense that what really turns them on is trying to figure out what is wrong or not wrong with the patient, i.e., making the diagnosis.
- I like when I can have an interesting conversation with the applicant and get to know them as a person. They already made the cut academically, or they wouldn't be interviewing.
- Have something interesting to talk about from your application.
- I love it when I learn something in the interview.
- I like good eye contact and students that are genuine and straightforward, comfortable being themselves, not trying to play some role in interview mode.
- Firm handshake.

## THINGS TO CONSIDER AT THE PROGRAMS WHEN INTERVIEWING AND RANKING

CORE exam pass rates, review courses, and dedicated study time

Conferences

- Quality
- Number
- Topics
- Cancellations

Is there a department/facility library?

- Teaching files
- Books

Opportunity to do cases

- Do the fellows stand in the way?
- Procedure log numbers
- Pick a particular procedure: e.g., Nephrostomies How many do residents do?

What are the elective opportunities?

- Legal rotation
- Practice management
- Personal finance

•. International experiences (e.g., Rad-Aid)

What are the benefits provided?

- Salary & how does it compare to others?
- Medical, dental, and optical insurance?
- Retirement plan and matching?
- Academic or book fund?
- Vacation days?
- Statdx, Radprimer, or e-anatomy?
- Conference funding?
- AIRP funding?
- Moonlighting opportunities?
  - ° Contrast coverage
  - ° Clinical moonlighting
- Parking included?
- Public transportation discounts?
- •. House officers' union?

Ultrasound scanning opportunities

How are the core competencies incorporated into the program? Do the residents evaluate the faculty?

Is research available? Required or encouraged

Is preliminary year included?

Fellowship Opportunities

Size of Program

- Number of residents
- Number of fellows
- Number of staff
- Is it small, medium, or large?

Geographic considerations

Is there diversity in the program?

Ethnic

• Gender

#### Camaraderie

- Between residents
- Between residents & staff
- Between residents & ancillary personnel

#### Relationship with colleague

Stability of the staff

- Are the numbers going up or down?
- Where has the staff trained?
- Is there a section of the department that is particularly strong or weak?

Is the Program Director approachable? And the residency coordinator?

• Is he or she a resident advocate?

## PACS and IT

Volume and types of cases at the hospitals

- Admissions
- Surgeries
- ED visits Trauma Center?

#### Facility

- Radiology equipment
- Physical plant
- Day care service
- Cafeteria
- Future expansion

Relationship of Radiology and the rest of the hospital

- Medicine
- Surgery
- Pediatrics
- OB
- ED

How does the hospital treat its employees?

#### Accreditation

• How many years?

#### Surrounding Area

- Childcare
- Schooling
- Shopping
- Housing availability
- Safety
- Social and cultural activities
- Sports

## SHOULD I SEND THANK YOU NOTES AFTER INTERVIEWING?

- No easy answer.
- It is not going to make a poor candidate a viable one, and if you are a good candidate then it probably won't make much difference to your ranking.
- Send via email to the program coordinator and a few selected people in a timely manner.
- Ask up front for PD preferences some will ask you not to.
- Between the time of the interview and the Match, students should exercise common sense and good taste, and bottom line: avoid irritating or causing more work for the PD.
- Make notes right after finishing the interview day, to help when you write these emails.
- Brief, professional, personal one that states something specific about the program or the interview day.
  - <sup>°</sup> Humor helps when in good taste.
  - Grammar and spelling all names should be correctly spelled.
- Try to personalize the email, if possible, with specific conversations you had with a particular interviewer. These reminders can come from any notes taken during or in between interview sessions.
- Try to send the thank you emails the same day or at least within one week following the interview when your face and interaction is still fresh in their

minds.

- **IF IT IS TRUE**, espouse your enthusiasm and allude to your hopes and send the **I AM RANKING YOU NUMBER ONE EMAIL**.
  - It is to your advantage to tell your number one program that you are ranking them number one. Do not send this email to multiple programs. Radiology is a small world and it might haunt you if you do this to multiple programs.
  - It is the best card you can play and the only way for you to TRY TO convince programs to rank you higher after the interview. Send this email in January, right before the ranking meeting. Make it short, concise, clear, and direct. Do not hedge or beat around the bush.
  - Telling a program that you are "ranking them highly," "near the top," or in other similar language will let the program director know that you are *not* ranking them number one. Because if you were ranking them number one, you would say so, since almost all medical students would say so to get themselves ranked higher. It might be better to not say anything than to tell them you are "ranking them highly." Program directors have been playing this game for many years, much longer than you, and know how to read in between the lines.

For discussion on communicating with programs, please see: <u>Applicant to</u> <u>Residency Program Translation</u> <u>Guide</u>

## RANKING PROGRAMS

- A computer with a mathematical algorithm determines your fate: <u>How the</u> <u>Matching Algorithm Works</u>
- Submit early you can change it don't wait until the final hours to certify it the first time.
- The radiology faculty advisor is YOUR advocate, and you should feel free to discuss your rank list with him or her. She/he will not divulge this to the ranking committee unless at any point it seems to YOUR detriment not to.
- There is no "one size fits all" answer to this. Refer to your detailed notes, but trust your gut: You must find the one thing that matters most to you in a program. Is a significant other/family in the city? Research or IR experience? Happy residents?

(See: <u>"THINGS TO CONSIDER AT THE PROGRAMS WHEN</u> INTERVIEWING AND RANKING" section)

- Rank all programs that you interviewed at, unless you really hated a particular place but consider whether you would rather not do radiology than match there. Be realistic. Don't get emotionally committed to any program.
- Rank based on where <u>YOU</u> want to go. The applicant's rank list has priority over the programs' rank lists!
   The computer algorithm DOES favor the applicant. Do NOT rank places you WOULD NOT go to.
  - Take the 3 you like best and put them in order of where you want to live.
  - ° Rank the bottom 3.
  - No advice about the middle ranks. They are often the most difficult to rank.
  - <sup>°</sup> Don't try and work in your interpretation of the likelihood of matching, you are likely to be wrong and it doesn't matter. List in the order <u>you</u> want.
- If you are interested in IR training and applied to both DR and IR residency (you generally should), then you will have to create a rank list containing both types of programs.
- Most applicants in this situation would rank the IR programs above the DR programs, however it is applicant and program specific. For example, you may rank IR program A #1 and IR program B #2 but prefer DR program A over IR program C at #3.
- Because IR residency is much more competitive than DR residency, you are likely to receive more AND better interviews at DR programs than IR programs. How you rank this is up to you.
- For Radiology, you must rank both your radiology PGY 2 year and your PGY 1 intern year. You must enter the intern year as a "supplemental list." So, if you match at program X, then the computer goes into the supplemental list you ranked for program X and it tries to place you as high as it can on that list.

Correspond with your top programs once more before they rank. (See <u>"WHEN</u> <u>YOU CAN CONTACT A PROGRAM DIRECTLY?</u>" section)

• Students feel that they will not be ranked well unless they tell the program that they are ranking that program number 1, or at least in the top 3. This isn't true – you will be ranked on your merits, although it helps to know if you are interested.

- At the end of the interview season, if you tell a program director that you are ranking their program "highly," then they know you are not ranking them number 1. With experience they have learned that if a student were ranking them number 1, then he or she would say so.
- So, it is only your "ranking you number 1" email that might have an impact on how programs rank you.
- Programs rank at all different times, and if you contact them, it should be before they rank. Find out their last interview day and email them shortly after this date.
- Conversely, programs might try to change how you rank them by sending you emails and saying you are ranked "highly." The only meaningful email from programs is a "ranked to match" email and this email might be deceiving. For example, if a program has 10 spots and you are "ranked to match," then theoretically you are ranked in their top 10 and will match there if you rank them number 1. However, people don't always tell the truth. Don't be sure until you open your letter on Match Day.
- It is within Match Rules to tell a program "You are my first choice." "Having finished my interviews, I wanted to tell you how impressed I was with your program. I am ranking you number 1 and would be honored to join you in 2---. I hope you will keep me strongly in mind."
- Match violations: programs SHOULD NOT ask you how you are ranking them (nor can you ask them).
- If a program calls and tells you that you are being ranked highly, you need not answer directly. Have a handy answer ready something positive, appreciative, but noncommittal: "Thank you, I am flattered and thrilled. You will be high on my list, but I haven't finalized it yet."
- Along the same lines, don't believe what they say about where they are placing you on the rank list.

For discussion on communicating with programs, please see: <u>Applicant to</u> <u>Residency Program Translation Guide</u>

## WAITING

- Relax. The hard part is over.
- You have probably seen areas of the country on interviews you never knew existed.
- Pay off your credit card bills.

 Make sure you have done everything you need to graduate and get excited!

#### MATCH WEEK!

#### Monday:

- Email from the NRMP at 12 noon EST: "Yes, you matched." or "No, you did not match."
- Contains both PGY 1 and PGY 2-5 matches, or PGY 1-5/6 categorical.
- No information about where you matched.

#### Supplemental Offer and Acceptance Program (SOAP) – Follow instructions.

- SOAP is the process through which positions offered by unfilled programs will be accepted by unmatched applicants during Match Week.
- SOAP replaces the "Scramble" and provides a standardized and uniform process for obtaining post- match appointments.
- All applications to programs are done via ERAS. Unmatched candidates select programs via ERAS starting on the Monday. Programs can contact candidates after reviewing applications. Candidates do NOT contact programs directly.
- Positions offered and accepted during SOAP establish a *binding commitment* enforced by the Match Participation Agreement.

For additional information, view <u>How SOAP Works</u>

## Friday Match Day:

- Depends on the medical school:
  - <sup>°</sup> Breakfast or lunch.
  - Applicants receive the envelopes containing their match, privately, publicly, in-person, or online.

## I DIDN'T MATCH WHAT SHOULD I DO?

It's not the end of the world. Though this is very stressful and not the result you would have liked, take a deep breath, and start to think about your options:

• Assess your interview season honestly. Are there things that you think you could have done better? Did you submit all your materials on September

7? Did you rank >13 programs if you were applying by yourself and even more if you were couples matching? Did you not rank some of the programs that you interviewed at?

- What are the SOAP options for this application cycle? Do you think that if you were to SOAP into a particular program you could potentially be happy there (both in terms of the program and the geographic location) for 4 years?
- Have a frank discussion with your advisor. Gather their opinions on your application relative to the degree of competition that you faced in your particular year (some years are much more competitive than others and if you were to redo everything exactly the same another year you may have a different outcome).
- After introspection and gathering this information:
  - If you believe that you can do better during the interview season but also feel that you could be happy at a program in SOAP, consider entering SOAP.
  - If you do feel you did everything you could in the interview season, there isn't anything that you would change/ improve upon, and if you would like to avoid taking a year off, consider entering SOAP.
  - There are websites like APDR, APDS (<u>https://apds.org/education-careers/open-positions/</u>) which lists open surgery or radiology positions that are still unfilled after SOAP. These provide opportunity for candidates to apply outside the NRMP match and can do so until June of that year (3 months post-match results) after which if still unmatched, will have to reapply at the following match cycle.
- Scenario: You do not want to go to any of the programs that are available in SOAP or you entered SOAP and did not get one of the available positions. Again, time for some introspection:
  - Do you absolutely want to go into radiology or do you think you would potentially be happy in another specialty? If you definitely want to pursue radiology, immediately start thinking about what you can do for the coming academic year that is radiology-related and put in applications. This may be research or even something related to product development or consulting. Regardless, make sure that it's something where you should be able to get time to go on interviews when you reapply. If you are considering another specialty but would prefer radiology, consider dual applying next

season. Find a mentor in that field to help you develop a reasonably competitive application.

- If you did not include a Step 2 score in your application the first time around, take and do well on Step 2. This will help to prove to programs that you are a strong applicant.
- When going through your second interview season for radiology, apply more broadly to programs, including university and community programs as well as programs in different geographic areas. Do not turn down any interview invitations and rank every program where you interview.
  - <sup>o</sup> Have a discussion with your medical school to see if you would be able to extend your time there for another year so that you can apply as a student still affiliated with your school. Historically unaffiliated applicants have had some more difficulty matching. If this is not possible, again, not the end of the world.
- There are 3 different scenarios to not matching into residency for a radiology specialty applicant:

1. Matched into preliminary/ transitional year, but NOT matched into radiology (Partial match): Candidates can enter SOAP with the list of unmatched radiology programs and try matching in SOAP. If unsuccessful at SOAP, you can keep checking the APDR website (Association of Program Directors in Radiology) (https://www.apdr.org/trainees/residencyinformation/residents-seeking-positions) which allows for programs posting open positions due to residents leaving the program for relocation related to family reasons, and also unmatched residents post on the website seeking radiology position. If still unsuccessful, you can enter the consecutive year NRMP match while being in intern year with stronger letters of recommendation from the intern year program.

2. Matched into advanced radiology program, but NOT into intern year program (Partial match): Candidates can enter SOAP with the list of unmatched preliminary/ transitional year programs and try matching in SOAP. If unsuccessful, you can do the same as above by checking the APDS website (Association of Program Directors in Surgery) (https://apds.org/education-careers/openpositions/) which allows posting by the candidate seeking preliminary surgery positions and also programs with open surgery residency positions. If still unsuccessful at SOAP, the situation is different from the above scenario because intern year matching is mandatory to start an advanced radiology residency. So, if candidate is unable to match into preliminary year by the start of next academic year which July of that year when they have to start intern year, you will have to contact the radiology program that you matched into and in most situations, you will have to give up the radiology program that you matched the following year as well. Few programs might allow a month or more grace period to let you find a preliminary/ transition year position. If that did not work, the candidates have to enter into the next NRMP cycle for full rematching process with both intern year and radiology program.

**3. Did NOT MATCH INTO BOTH intern year program and advanced radiology program:** there are 2 options which candidates have in this scenario.

- Option A: Try SOAP process and try at least to match into preliminary/ transitional year (more important than trying to match in radiology program in this scenario) and post SOAP trying for the same until June of that year. If unsuccessful, enter the NRMP match next year while boosting the CV with more research/ academic activities.
- **Option B:** Try matching into different subspeciality in SOAP if not willing to waste one more year before next NRMP match, for example, Radiation oncology etc. (previous yearsnuclear medicine residency which is now merged into radiology residency), which might be closer one to match with ERAS application documents which reflect your interest in radiology. However, the caveat is if the candidate is still interested in entering radiology residency at later date, this step complicates it. Once the candidate signs the offer from a different specialty residency program, they are not eligible to enter the traditional NRMP match in the subsequent years. However, the candidate can switch residencies in second year if any radiology position opens up elsewhere but with consent and approval from your current enrolled program. So, candidates might think twice before choosing this option.

#### **FINAL ADVICE**

In conclusion, this is not a black and white process.

- Opinions vary and you will hear many different ways of attacking the residency application process.
- Follow your gut and do what you think is right.
- Be your own advocate applying to residency is not a passive process.
- Be strong and positive it IS better on the other side of medical school!
- Read and know a radiology book for medical students at the end of intern year so that you can hit the ground running.

Best wishes!!

## **ONLINE RESOURCES**

The following online resources are that of the opinions of the authors. These online resources are not validated or endorsed by AMSER or AUR. The goal is to offer potentially helpful resources, with an understanding that the information and application process is ever changing.

1. <u>American Medical Association (AMA) FREIDA<sup>™</sup></u>

Ability to search residency and fellowship programs that are accredited by the Accreditation Council for Graduate Medical Education (ACGME).

#### 2. <u>Residency Explorer Tool <sup>™</sup> Tool</u>

This tool allows one to explore and compare residency programs in 23 specialties as well as compare an individual's profile to applicants who matched at each program.

3. <u>Texas STAR (Seeking Transparency in Application to Residency)</u>

Powered by UT (University of Texas) Southwestern Medical Center. This nationwide survey and online tool, administered by UT Southwestern Medical School, allows medical school deans, advisors, and fourth-year medical students access to real application data of recently matched fourth-year medical students. This database allows students to better target their applications to programs that they are more likely to receive interviews and ultimately match into.

4. <u>National Resident Matching Program (NRMP®) 2022 Main Residency Match®</u> -This pdf report contains statistical tables and graphs for the Main Residency Match<sup>®</sup> and lists by state and sponsoring institution every participating program, the number of positions, the number of positions offered, and the number filled. SOAP<sup>®</sup> data also are presented.

- 5. <u>APPS OF STEEL</u> TeamRads.com. Guide to matching into radiology and other matches from the perspective of Donna Magid, MD, M.Ed, FAUR
- <u>TheRadRoom</u> Centralized resource for those interested in radiology and are applying to diagnostic/interventional radiology residency. Recent launch of a series known as *Program Director Tip of the Day* with tips/advice from Program Directors and Associate Program Directors regarding common questions applicants have.

**Charting Outcomes in the Match, 2022:** These reports document how applicant qualifications affect match success. Ten to twelve measures are examined in the reports, including the number of contiguous ranks in preferred specialty, the number of distinct specialties ranked, USMLE® Step 1 and Step 2 CK scores (for U.S. allopathic seniors and IMGs), COMLEX-USA® Level 1 and Level 2-CE scores (for osteopathic seniors), and the numbers of research experiences, publications, and work and volunteer experiences.

- <u>Charting Outcomes in the Match for U.S. MD Seniors</u>: Characteristics of U.S. MD Medical School Seniors Who Matched to Their Preferred Specialty in the 2022 Main Residency Match (3<sup>rd</sup> edition) (*PDF*, 220 pages)
- <u>Charting Outcomes in the Match for U.S. DO Seniors</u>: Characteristics of U.S. DO Medical School Seniors Who Matched to Their Preferred Specialty in the 2022 Main Residency Match (3<sup>rd</sup> edition) (PDF, 222 pages)
- <u>Charting Outcomes in the Match for International Medical</u> <u>Graduates</u>: Characteristics of International Medical Graduates Who Matched to Their Preferred Specialty in the 2022 Main Residency Match (4<sup>th</sup> edition) (PDF, 294 pages)

List of ACGME Accredited DR Residency Programs List of ACGME Accredited IR Residency Programs Fellowship and Residency Electronic Interactive Database (FREIDA)

Electronic Residency Application Service (ERAS) National Resident Matching Program (NRMP) Doximity Residency Program Ranking