

Career Counseling in Pathology

Frequently-Asked Questions

This booklet has been prepared by the Department of Pathology in response to questions frequently asked by medical students who wish to explore the training and career opportunities in this field. We hope that it will be helpful to students and serve as a basis of discussion in individual meetings with faculty members and residents. Unlike other specialties in medicine to which you will be exposed through clinical clerkships or other rotations, you may never know what it is like to be a pathologist unless you make a special effort to spend some time with us.

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

Actually, the career opportunities in Pathology are broad and there is tremendous flexibility within the field to tailor your career to your interests and strengths. The pathologist is a physician who specializes in the diagnosis and management of human disease by laboratory methods. Many physicians refer to pathologists as “the doctor’s doctor”. However, we see ourselves as the patient’s doctor, integrally involved in patient care.

Pathology provides a scientific foundation for medical practice and it is hard to imagine practicing medicine today without the help of a pathologist in making a definitive diagnosis. Pathologists function as diagnosticians, as consultants on the management and treatment of patients, as teachers and as investigators. Pathology encompasses both Anatomic Pathology and Clinical Pathology. Anatomic Pathology includes analysis of tissue and cells and includes Surgical Pathology (biopsies, resections), Cytopathology (fine needle aspiration, body fluids, gynecologic preparations), and Autopsy Pathology. Fellowships are available in virtually every organ system (see comment below on fellowships). Clinical pathologists are responsible for the laboratory interpretation and administration of laboratory tests in areas including Clinical Chemistry, Microbiology, Hematology/Hematopathology, Immunology, and Transfusion Medicine. Clinical pathologists help other physicians in the interpretation of laboratory data and assist them in ordering and interpretation of appropriate tests.

What are some common misperceptions about pathology?

1. Pathologists deal only with the dead. FALSE!!!!
Don’t be turned off by friends or advisors who have no idea what pathology encompasses or what pathologists are like. It is a common misperception that pathologists only do autopsies and deal with the dead. Nothing could be further from the truth.
2. If you don’t like histology, you won’t like pathology. FALSE!
Pathology is a broad field and some pathologists never use a microscope.
3. Pathologists don’t communicate much. They sit in a dark room by themselves in a basement and don’t like people. FALSE!

Excellent communication skills are important in order to be a successful pathologist. Pathologists present at multiple conferences every week (tumor boards, morbidity and mortality conferences, performance improvement meetings...), discuss diagnoses with physicians and sometimes with patients, advise other physicians on appropriate blood products, and help in the ordering and interpretation of laboratory tests. Pathologists at academic medical centers also must have excellent communication skills for their role as medical educators.

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

Pathologists participate in the diagnosis and management of all patient populations. Although there are fewer opportunities for direct patient contact, some pathologists see patients directly. Pathologists who specialize in cytopathology perform fine needle aspirations on palpable masses or lymph nodes and can often provide patients with an immediate diagnosis. Pathologists who specialize in transfusion medicine run blood banks and supervise plasmapheresis or red cell exchange. They may evaluate patients directly in cases of transfusion reaction and are often consulted by other physicians on an emergency basis for advice on which blood products the patient needs. Hematopathologists may perform bone marrow aspirations, communicating directly with patients. Forensic pathologists communicate directly with family members, lawyers, juries, television reporters and the public. Other specialists such as neuropathologists often communicate with the public through participation in national societies such as the Alzheimer's Association. Lastly, with the increasing complexity of molecular methods and personalized medicine, pathologists may be directly consulted by patients to explain their findings. There is occasional "emergency work". The pathologist on call may be called in to the hospital at night or on the weekend for an intraoperative diagnosis for an emergency surgery.

- **What types of technology will I encounter?**

Pathology is a great field for people who love working with emerging technologies. Pathologists who specialize in Informatics manage the wealth of data available through the clinical laboratories. These data play a role in quality assurance and utilization of testing and offer abundant material for clinical research. Molecular pathologists are leading the way in genomics and personalized medicine, and work with rapidly evolving technologies highlighting appropriate treatment options in disorders, e.g. infections and cancer.

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

Pathologists are curious and enjoy problem solving. They are self-motivated life-long learners, often reading around their cases and keeping up with the latest developments. At the same time, pathologists may handle a large volume of clinical work and must be organized and decisive. Pathologists must be effective communicators with excellent oral and written skills. These are essential, whether reporting findings to clinical colleagues, presenting at tumor boards, writing reports, or justifying the purchase of new laboratory instruments.

Pathologists enjoy teaching and sharing their findings with other physicians and student groups.

- **How long is the training program/residency?**

The typical residency consists of a 4 year integrated program in Anatomic Pathology and Clinical Pathology. Some residents may choose to specialize in only Anatomic Pathology or Clinical Pathology for a three year residency program. A 4 year combined specialty / subspecialty training program in Anatomic Pathology and Neuropathology is also available for residents interested in becoming neuropathologists.

- **Are there fellowships available after residency?**

Fellowships are available which offer subspecialty certification by the American Board of Pathology. These include cytopathology, forensic pathology, dermatopathology, molecular genetic pathology, pediatric pathology, chemical pathology, medical microbiology, blood bank and transfusion medicine, hematology, and neuropathology. All are one year fellowships with the exception of neuropathology which is a two year fellowship. In addition, other fellowships without certification are offered in many areas of pathology including renal pathology, oncologic pathology, GI-Liver pathology, general surgical pathology, etc.

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

We would be happy to speak with you about this. It is not necessary to have honors in every subject to match in an excellent pathology program. On the other hand, if you have struggled with academic issues in medical school, have had to repeat subjects or have failed or done poorly on USMLE Step 1 and/or Step 2 examinations, you may not be a suitable candidate for pathology. There is no mandate to take Step 2 early. However, if you have not done particularly well in Step 1 (below 80 on 2 digit score or approximately 195 on 3 digit score) or have failed and retaken your Step 1, you may wish to take Step 2 early to document improvement.

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

No- not for US medical school graduates.

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

Yes. Take electives in pathology to document your interest in our specialty. Demonstrate enthusiasm and interest, and professionalism. Try to get to know one or two of the faculty who may be willing to write letters for you in the future. Maintain contact with the pathologists through your other rotations by following your patients' tests, attending conferences, etc.

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

Outside electives are not required. If you plan on applying to a very competitive program, you may seek approval for an away elective from the College of Medicine. However, many of our students match in outstanding programs without taking advantage of this option.

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

No preliminary year is required.

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

Research experience and publications certainly will not hurt but are not required. However, a research background may enhance your eligibility for certain competitive academic programs. Research experience will not offset a low Step 1 score.

- **Does the field of Pathology lend itself to research opportunities? YES.**

Pathologists have a distinct advantage in certain types of clinical research. Remember that surgical specimens and laboratory samples all come to Pathology so there is abundant access to interesting clinical material and data. Moreover, pathologists often participate in interdisciplinary research projects with their clinical or basic science colleagues. For example, on an NIH program project concerning molecular aspects of breast carcinoma, the collaborating pathologist may run a "pathology core".

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

No, although programs value individuals who have demonstrated leadership in community service and other activities.

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

Our program likes to see a few letters (2-3) from pathologists. Once you have made the decision to apply to pathology programs, it is advisable to get to know the department chair who will usually be willing to write a letter on your behalf. In addition, seek letters from more senior faculty and division directors, e.g. director of surgical pathology, director of cytopathology, etc. Those you ask should be individuals you have gotten to know through elective rotations or through career discussions with them. Make an appointment and ask the faculty member directly if he/she is willing to write a letter for you. Most are happy to do this.

- **How do I meet with residents in the field and ask them to share their experiences and advice?**

Take electives, come to conferences, and get to know the residents.