



Should a Pathology Rotation be required in Medical School? A Fourth Year Medical Student Perspective

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ABSTRACT

The last two years of medical school allow students to apply their basic knowledge of medicine into clinical scenarios and to develop the skills they will need to become good future doctors. The way our current educational system is designed, Pathology is not a required clinical rotation in medical school. This perspective provides a medical student's insight into why this should change and highlights the Pathologist vital role in healthcare.

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Introduction

For over twenty years, the standard in third and fourth year medical school has been the same. All third year medical students have to take specific core rotations that include Internal Medicine, OB/GYN, Psychiatry, Surgery, and possibly Family or Emergency Medicine. In the final year of medical school, other electives are typically scheduled based on the student's personal preferences to help them prepare for their intended medical specialty. All of this is done in the hopes to fulfill the goals of the student's medical institution as well as the AAMC, which is to ensure that medical education is being advanced "to meet society's evolving needs; making patient care safer, more affordable, and more equitable; and sustaining the discovery of scientific advances".

Looking back, I can say that the core rotations that I took during my third year were essential to my professional development. I can't imagine graduating from medical school without the opportunities to encounter the full range of clinical scenarios and the breadth of patients that I have seen. While rotating in Internal Medicine, I became more confident in diagnosing medical conditions by combining a focused history in tandem with my clinical exams. In Pediatrics, I learned how challenging it was to take care of neonates and how the patient's needs change as the child develops into an adolescent. During my OB/GYN

rotation, I watched with amazement as a baby was born after a challenging course of labor and the sheer joy in the mother's face when she saw her daughter for the first time. The complexity of the human mind still boggles me after my Psychiatry rotation. I now also value the role that both the Family Medicine doctor has in taking care of patients in an outpatient setting and the potential healing a surgeon can provide with a scalpel in his hand. Yet, as I finish my medical school training in a few short weeks and am getting ready to be called a doctor, I realized that I almost missed taking a rotation that is the backbone of many other specialties, and that is Pathology. The way our current educational system is set up, most students won't ever get the necessary clinical exposure into this field unless they have some pre-existing interest. It might be time to make this specialty a required rotation in medical school to help us develop better future doctors.

Those who have not done a pathology rotation at some point in their training would take what I propose as unnecessary. Most don't realize what an important role the Pathologist has behind the scenes in the hospital and how their job translates into better patient care, an improved health care system, and better public/global health. When most people think about what a Pathologist might do daily, they imagine a doctor doing autopsies and working alone in a lab

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without any human interaction. This is not true based on what I have seen.

Description

The Pathologist works in concert with lab staff, including lab technologists, pathology assistants, and administrators. They frequently interact with clinical colleagues to relay a critical finding, discuss differential diagnosis or participate in discussions at multidisciplinary conferences. In addition, their residency training is broad; therefore we can find them working in many areas in the hospitals that often goes unnoticed by medical students, such as cytology, hematology, chemistry, microbiology, etc. I have seen specimens being sent from every part of our hospital for the Pathologist to review. For every lab order placed for a patient, it is quickly processed and then personally reviewed to ensure its accuracy. The Pathologist also acts as a consultant to medical colleagues and gives advice on the possible blood products that can be given to patients who is hemorrhaging or has certain coagulopathies. When a suspicious tissue is removed from the patient's body and sent to the lab, it is again the Pathologist that provides a quick and accurate in-depth description of the sample to help the ordering physician in caring for the patient. I have watched as they would spend time looking at specimens grossly and under the microscope to determine if what they saw was normal, a benign mass, or even malignant cancer and then further stage it if necessary. This job is something that every pathology resident or attending I met took with seriousness because of the enormous implications it has on the patient, the doctor, and the hospital. Pathologists will frequently discuss cases with each other that they find challenging or if they believe that there is a possibility of making a first time cancer diagnosis for a patient.

During this rotation, I have often been present when surgeons would send a tissue biopsy from a lesion for intraoperative consultation. They often ask if they should continue with the surgery or if the surgery should be stopped because the cancer is so advanced and cannot be managed with surgery. All the pathologists who I shadowed worked quickly and meticulously when these surgical consults came in. They process those samples and then examined them

underneath the microscope to see if the edges of the tissue were clear of the cancerous cells, which indicates that all the cancerous mass was removed. I was amazed when I realized that most patients probably still have no clue about the Pathologist's role in helping guide their surgeries.

When actively participating in autopsies performed by Pathology residents and attending's, I came to the realization how the findings in each one would be different because no two patients are the same. Although it might seem barbaric to open up the body and remove the organs, this is necessary to provide information to the family of the exact cause of death. The autopsy may also reveal something that was previously unknown about the patient, which can help the family members seek additional health screening. The Pathologist is thorough and respectful of their examination of the deceased and the family's wishes. I watched in wonder as I saw cancerous growths on organs with my own eyes. Here, I examined these organs and pinpointed for myself the possible abnormalities and variations in anatomy. From the autopsies, I saw for the first time the evidence of an intracranial hemorrhage, pulmonary embolism, pulmonary fibrosis, perforated intestines, diffuse pleural adhesions, and now I have a greater appreciation and respect of the human anatomy. Like every medical student, I saw normal anatomy during my cadaver exploration in year one of medical school, but seeing it again after having clinical exposure in the hospital and being responsible for many of these types of patients during my other core rotations is what tied my basic science knowledge with my clinical experiences and is giving me the confidence as I am almost ready to graduate.

Conclusion

Now that I am at the end of my Pathology rotation, I have a greater awareness of the Pathologist's role in helping take care of our patients and will be relying on my experiences in this rotation as I continue my career forward. I firmly believe all medical students should take a rotation in this field before they graduate, and who knows? Maybe they will decide that they want to become a Pathologist and be known as the doctor's doctor.