We sat in pained silence, together in the ICU conference room with the patient’s family. Our team had finished answering all their questions, from the trivial to the life and death decisions at hand. Our attending was visibly crying, and I was struggling as well. The patient’s children looked stunned, still unable to believe what we had been telling them for weeks. We still had no idea what was killing their mother, causing lesions in her brainstem to rapidly expand despite our best efforts.

I had never met this woman before her precipitous decline, and thus I could not possibly feel the same pain as her family. Yet I found myself increasingly upset, and simultaneously fascinated. How is it that we could not even put a name to her disease, let alone treat it effectively? Was it a cancer? An autoimmune process? Some yet undiscovered infection? At a basic scientific level, we were missing a fundamental understanding of her disease.

This is what pulls me towards pathology. This specialty demands an expertise in basic science, for the compassionate purpose of diagnosing disease and improving health. I was driven to medical school by a desire to understand basic science, and it is exactly this understanding that will refine our treatments and may ultimately help patients such as this one. I therefore feel a strong responsibility to participate in bench research for this purpose.

I am also excited by the high stakes nature of diagnostic medicine. Our successes and failures lead to spectacular victories and unthinkable losses of life. The involvement of human life and suffering makes this field about more than scientific curiosity for me. In addition to a thrilling expertise in basic science, I have found that pathology training will demand pain-staking accuracy and confidence. I know I will relish this responsibility.

Although all specialties of medicine arguably have high stakes and no room for error, only pathology does this with an ultimate emphasis on basic science. My experiences in both medical school and as an undergraduate have shown me that this emphasis on basic science is my true passion. It is both the foundation and greatest strength of western medicine, and its relevance to clinical disease has fascinated me for my entire life. As a five or six year old, I remember trying to dissect two leaves with a pair of tweezers, in a primitive attempt to figure out what made one green and healthy and the other one brown and sick. I also remember once requesting proof from my first grade teacher that germs can travel through the air and make people sick, and that washing hands after sneezing was an effective strategy to prevent this. While my access to scientific resources has since improved, my innate curiosity remains unchanged.

This curiosity has only been furthered by my clinical and research experiences in medical school. I remember being gripped by my histology course as a first year student, amazed by the microscopic complexity of the human body and somewhat stunned by its organization and architecture, invisible to the naked eye. I also remember being thoroughly impressed by the histopathology course as a second year student, and intrigued by the differences between normal and diseased tissue. Additionally, I have participated in a bench research project investigating the molecular mechanism behind inflammation involved in necrotizing enterocolitis. This solidified my interest in pathophysiology and laboratory research.

My formative experience, however, came as a fourth year student rotating through surgical pathology. Here I witnessed and learned the basics of a key skill, one that defined my career direction and continues to inspire my respect – using clinical and tissue-based evidence to create a differential diagnosis. This to me is the ultimate combination of scientific knowledge and patient-centered care. The perfect fusion of being a doctor, and a scientist. I am very excited to start my own career pursuing this mix as a pathologist. And I am very hopeful that I can someday contribute to the fund of scientific knowledge, and in doing so improve the lives of my patients.