

To the Program Director in Ultrasound:

This letter is to declare my strong interest in the Ultrasound Fellowship at your institution. Other than emergency point-of-care ultrasound, my interests include medical education – both clinically and through social media, simulation and critical care.

I have two on-shift moments that I want to share as my impetus and inspiration to pursue an ultrasound fellowship. They are two of many personal moments that illustrate how decision-altering and life-saving emergency ultrasound is. The first moment was at the start of my intern year, during a day shift in our acute care pod. My first patient was an elderly male presenting with difficulty breathing. He was clearly in respiratory distress, struggling to breathe as he came directly to our resuscitation bay. He was one of my first truly sick patients. Like most new interns, I was panicked and worried about what to do next. Fortunately, my attending that day was my ultrasound director. He came into the resuscitation bay flanked by an ultrasound machine. After 30 seconds of hunting through the patient's thoracic cavity with a linear probe, he announced "This patient has a right-middle lobe pneumonia. And he's septic. Antibiotics, O2, MICU."

It felt like I had just witnessed a feat of magic. The patient had not even been registered into our EMR, but we already had a diagnosis. Sure enough, the radiologist saw the same pneumonia on the patient's chest x-ray 45 minutes later. By that time, our MICU consultant was at bedside, ready to accept our patient. It was during those 45 minutes that I resolved to learn more about ultrasound.

Since that morning, I have learned so much from every single ultrasound scan I have done. On a busy Monday at the start of my senior year, I had another fellowship-affirming moment. My first patient was an elderly male who had fallen. He complained of significant left hip pain. I greeted him in our resuscitation bay, flanked by our Zonare. He was hypotensive and it fell to me to find out why and I had the perfect tool to help me. It took 10 minutes for me to perform an E-FAST, track his abdominal aorta from celiac trunk to iliac arteries and look for an expanding hematoma in his left leg. I found no abnormalities. He would go onto develop a pedal pulse deficit in his left foot that caused vascular surgery to take him to the operating room for acute limb ischemia. He would code on the table. An intraoperative trans-esophageal echocardiogram made the diagnosis of a massive aortic dissection. He would not make it out of the operating room.

It was a difficult-to-establish diagnosis – an aortic dissection without chest or back pain. But as I was reviewing my ultrasound images at end of shift, I looked at the images I clipped from this patient. When I looked closely at his abdominal aorta at the iliac bifurcation, I saw a crescent line within the vessel lumen. It was the flap of my patient's dissection staring back at me – clear to see once I knew the final diagnosis but in the moment, I missed it. I missed it not because of image quality, not because of body habitus, but because I did not realize I was seeing a dissection flap in real time.

That case made me realize that there is much more I have to learn. In three years, I have come very far as a sonographer. I can see that as I compare my two cases. In my second case, I was able to rule out so many diagnoses in such a short time window, but I still missed the final diagnosis. Finding pneumonia in the right middle lung or the flap of an aortic dissection are two of many skills that

ultrasound-adept providers can potentially gain. If selected as one of your ultrasound fellows, I certainly want to use the knowledge and skill I gain to teach others and advance the field of emergency ultrasound, but ultimately I want to be the best emergency physician I can be. I see the part that ultrasound can play in that role, not just for myself but for my future patients. As your ultrasound fellow, I will ensure that future clinicians have a far better understanding of ultrasound and are able to better the lives of their patients and their trainees as a result.

Please feel free to contact me by phone or by email. I look forward to hearing from you. Until then, I wish you the best during your interview season.