As a medical student, do you ever wonder what it's like to specialize in diagnostic radiology? Meet Katie Lozano, MD, a radiology specialist and a featured physician in the AMA’s “Shadow Me” Specialty Series, which offers advice directly from physicians about life in their specialties. Check out her insights to help determine whether a career in diagnostic radiology might be a good fit for you.

The AMA’s Specialty Guide simplifies medical students' specialty selection process by highlighting major specialties, detailing training information and providing access to related association information. It is produced by FREIDA™, the AMA Residency & Fellowship Database®.

Learn more with the AMA about the medical specialty of diagnostic radiology.

Katie Lozano, MD

"Shadowing" Dr. Lozano

**Specialty:** Radiology.
Practice setting: Emergency teleradiology from a home office in Centennial, Colorado.

Employment type: Employed by a national emergency teleradiology practice.

Years in practice: 14 in traditional private practice, followed by two years of emergency teleradiology.

A typical day and week in my practice: I work from my home office 8 a.m.–6 p.m., seven days on, then seven days off. The majority of physicians in my practice work evenings or overnight and prefer to do so. Most of our case volume is during the night, so fewer of us are needed during the day.

Working from home as an emergency teleradiologist, I love my job for the first time in my life. My work stress level—relative to where it was in traditional private practice—has decreased to zero. After a four-second commute, I either walk on a desk treadmill or sit with one of our cats on my lap while I start reading patient studies. I often have the windows open to hear the birds sing and to enjoy Colorado weather. It really is that idyllic—open windows are exceedingly rare in typical radiology reading rooms.

Another unique thing about my emergency teleradiology practice is that, at the end of my shift, my work is done. We have a queue of studies to read that is carefully crafted across the practice based on our preferences, credentialing, licensing and expertise. But even if there are 50 cases in my queue, my workday ends. I have partners logging in wanting to read those cases. In many private practices, you stay until the studies from your shift are done, particularly if they are specific to your area of expertise.

My current practice also gives us the opportunity to tailor our work to our interests and priorities. I did my fellowship in musculoskeletal imaging, so I enjoy reading challenging musculoskeletal (MSK) MRIs and CTs. I’m tagged in our system, by my decision, as an MSK specialist inviting consults, so my colleagues know they can send me MSK consult requests with just two clicks. These consults from radiologists across the nation are typically interesting and unusual cases. Most important to me: I might be able to make a difference in a patient’s care based on my fellowship expertise.

During a typical day, I see a variety of patient studies, mostly CTs. I also see many radiographs and ultrasounds and a fair number of musculoskeletal MRIs. As emergency radiologists, we are all expected to interpret core studies, which are studies that are comfortable for me to read. I elected to exclude a few non-core types of studies, such as brain MRIs.
Working a week-on, week-off schedule gives me essentially half the year off to take on leadership roles and pursue activities that I could not do if I was still in traditional private practice. I chair the board of directors of Doctors Care, a clinic providing high-quality health care and health system navigation assistance for people who are uninsured or underinsured in south-metro Denver.

I am on the board of directors of a practice-based groundbreaking charitable organization created by one of my partners a few years ago. This initiative was formed to help make diagnostic imaging accessible to patients in unserved and underserved regions worldwide. Over 4 billion people—two-thirds of the global population—do not have access to radiology services. Through this initiative, radiologists in my practice can donate the reimbursement for any number of cases they read per shift or per hour. In our inaugural year, we raised over $114,000 to bring imaging resources to those who need it most.

I am also working with computer scientists in my practice during my time off to help develop an artificial intelligence algorithm to identify active gastrointestinal bleeding on CT. We already have live algorithms on our platform to identify and escalate patient studies showing intracranial hemorrhage, pneumoperitoneum and other critical findings. I am very fortunate to be part of a practice developing technologies to rapidly accelerate care delivery for patients who have critical findings on their imaging studies. Most of the studies we read are already classified as emergent, so interpretation—even just a few minutes faster through this system—can make a significant difference in patient outcomes when such critical findings are present.

**The most challenging and rewarding aspects of diagnostic radiology:** The most challenging aspect of taking care of patients in radiology is the lack of sufficient clinical information about the patient to ensure the best interpretation of their images. My practice has a great program to get patient history and automatically insert it into my interpretations, along with contrast dose and type and radiation dose if necessary. But it is still difficult to always ensure we get all the information we need to provide optimal patient care. Knowing more about the patient helps me help the patient, as well as the referring physician.

I start each day eager to solve problems for patients, eager to find answers for them and eager to work as a member of the team providing their care. With this attitude, it is an honor and a privilege to go to work each day. I get to speak with physicians and other health care professionals across the U.S. to help take care of patients. Occasionally, physicians or other health care professionals call with a question and start off by saying, “I’m so sorry to bother you.” My immediate response is, “Not at all! That’s what I’m here for!” Ironically, I am at home, but I am there to help them however I can.

Radiologists are, at times, thought to be at a great distance from patients, but the people I see as a radiologist are often still in my thoughts, decades later.
How life in diagnostic radiology has been affected by the global pandemic: My major concern was, and still is, its impact on patients. Most disturbing to me during the time when we saw fewer imaging studies was the severity of disease and trauma that patients suffered before seeking care. Although I was reading fewer imaging studies from March to May 2020, I was calling with results much more often because the situations patients were enduring were so dire. When I was calling with critical results, I was often also conveying potentially unexpected incidental lung findings typical of COVID-19 pneumonia.

I am dealing with the pandemic challenges by trying to identify and focus on opportunities to improve patient care. By late February 2020, I was working with our chief medical officer (CMO) to create a continuing medical education (CME) course on COVID-19 and associated findings on CT chest studies, based on the literature available and early positive patient cases from across our practice. This CME course was delivered by our CMO to an online national audience on March 11, 2020. By late March, we had a system added to our platform so we could quickly insert language regarding COVID-19 pneumonia based on recommendations in the literature. Also, my “extra-curricular” work with Doctors Care Clinic gives me the opportunity to actively support front-line providers and help find solutions for our clinic, our patients and our community.

The long-term impact the pandemic will have on diagnostic radiology: I believe the most important long-term impact in radiology will be on patients. In the first few months of this year, we were seeing the ramifications of lack of access to treatments, such as surgery and chemotherapy over the previous year and the lack of follow-up imaging considered elective or too dangerous during that time period. The number of people I am seeing who had known cancer and significant progression of metastases over the past year is remarkable compared to a typical year. I think the longer-term impact will be the effects of decreased preventive screening patients have received—not just in radiology, but across the house of medicine.

I also believe the pandemic will reveal an increased transition into—and creation of—work-from-home opportunities in radiology, which my practice optimized from a technical and support standpoint long ago.

Three adjectives to describe the typical diagnostic radiology specialist: Analytical, resourceful and thoughtful. Three more: Accurate, thorough and effective. You can be accurate and thorough by detecting and describing a lesion in the pancreas, kidney, adrenal gland or thyroid, but you are unlikely to be truly effective if you do not address appropriate required guidelines from the literature for what the patient and his or her health care providers should or should not consider for follow-up and when.

How my lifestyle matches, or differs from, what I had envisioned: I think as a medical student I had imagined traditional private practice radiology, but I hadn’t realized how busy and stressful it
would be. I also did not yet know that I wouldn’t enjoy performing procedures, particularly spine injections. Plus, I had no idea how often I would be interrupted by phone calls and procedures not necessarily pertinent to the work at hand in traditional private practice.

But now, as an emergency teleradiologist in a very large practice, I am in the most patient-centered radiology practice I have ever encountered. Everything is focused on keeping my eyes on the images of my patient, eliminating the usual distractions radiologists experience elsewhere.

I could not have envisioned my current teleradiology practice when I was in medical school. A private practice radiology job where you could have half the year off, make what you wanted to make and have tons of time for family and life outside of work would have seemed like a mythical tale that could only happen for someone who could do the work of four radiologists at once for 12 hours a day to compensate. My current partners looking for a particular income goal can literally create their schedules and any extra shifts to dial in their preferred salaries, and they can track their goals by the case, hour, day or month. Meanwhile, people like me can also take care of patients, take consults and challenging cases, and be at ease not tracking those details. There is room for all of us. My only regret is not switching to teleradiology earlier.

All of which is to say I finally have the ideal version of work-life balance: I look forward to my work so much as a highly enjoyable part of my life, rather than a stressor. I am no longer struggling to create a life outside of work to balance how stressed and burned out I feel at work. The stress of my prior work life was not unique in any way to a particular practice; it was just typical private practice radiology, which is fine for many people but not for me.

Also, I do not have children, but I have heard extensively from my colleagues that teleradiology, and, in particular, night-time teleradiology with significant time off like we have in my practice, lends itself to raising a family, being able to be a significant part of that family every day. We can also take frequent breaks if we wish to do so.

Skills every physician in training should have for diagnostic radiology but won’t be tested for on the board exam: Excellent communication skills are absolutely necessary. There is a misconception, mostly on TV shows, that radiologists are anti-social loners who do not interact well with others. Communication skills are essential, not just in writing but also in person and by phone.

One question physicians in training should ask themselves before pursuing diagnostic radiology: Do you need to be in the same room as your patients and their families to feel like you are making a difference in their care? Does the idea of sitting, standing or, in my case, treadmill-walking in front of three large, high-resolution computer screens taking care of patients by interpreting studies for hours at a time sound like a tremendous opportunity or an onerous chore? I clearly see that as a tremendous opportunity, but others might see it very differently. If a day with no procedures or no direct patient contact is a bad day for you, there are still interventional and breast imaging radiology
subspecialties that could work well for you.

**Books every medical student interested in diagnostic radiology should be reading:** It is hard to choose just one book by Atul Gawande, MD, but at least one should be on this list. I think the best is *Better: A Surgeon’s Notes on Performance.* This applies to all physicians as we strive to provide the best care for our patients despite the frequent challenges we encounter.

Also, *Fundamentals of Diagnostic Radiology,* by William E. Brant, MD, and Clyde A. Helms, MD, is a hefty book for radiology residents, but it’s certainly worth using as a reference to learn the relevant imaging for each of your clinical rotations in medical school and internship. Find a used copy, and make it a fun and useful thing to look up imaging findings for the symptoms and diagnoses your patients have. If you manage to read this book during medical school, you’ll be well ahead of many of your colleagues. If for some reason you choose a specialty other than radiology, you will have an excellent education in how to best help your patients using imaging.

I would also recommend a book in a non-radiology specialty of interest, particularly if it will be relevant to a radiology subspecialty you are likely to choose.

**The online resource students interested in diagnostic radiology should follow:**

- The AMA and your state and county medical societies.
- Radiology societies, such as the American College of Radiology (ACR) and the Radiological Society of North America (RSNA), particularly since joining is free until your training has ended.
- Free CME from those same organizations. ACR Case-in-Point and RSNA Radiographics articles are great resources that will often be helpful for you and your patients on your clinical rotations and in your training, examinations and future career. Carefully record any CME you do and update your CV thoroughly on a regular basis.

**Quick insights I would give students who are considering diagnostic radiology:** One of my good friends who is a radiologist often says, “To be a good radiologist, you need to know everything.” In many ways, I think he is correct. Even if you are in a highly subspecialized position reading only musculoskeletal MRIs, other structures, such as ovaries, testicles and bowel, are included on your pelvis and hip MRIs.
Also, be ready for change, and look forward to it. When I began my career in radiology as a resident, in 1999, we had to hang up films on a huge rotating alternator machine. The CT cervical spine studies were the main studies with routine sagittal and coronal reformatted images, which are now standard on all CT studies. These were printed, postage-stamp-size images on film. This is unfathomable today, when we scroll through perhaps 7,000 images on a single study, such as CT angiography of the aorta with bilateral lower extremity runoff.

Another example of positive change is the artificial intelligence models prioritizing critical cases in my practice. It is wonderful to see change occur in your own practice to optimize patient care and to be actively contributing towards it.

Finally, find the right practice type and subspecialty for you. This is not particularly easy. The best way to figure out the right practice type and subspecialty for you as a radiologist is to shadow as many radiologists as you can. Even if you are unable to interactively shadow a radiologist, see if you can just watch a radiologist work for a few hours, to see what it is like in different radiology practice settings and subspecialties.

**Mantra or song to describe life in diagnostic radiology:** There are two.

One is by Daniel Johnson, Jr., MD, a radiologist and former AMA president and a great mentor of mine. I strongly believe his words apply in my daily practice and in my career: “I am a physician first, then a radiologist.”

Another is, “Always see the patient behind the image.” I learned this from my grandpa, who trained in radiology in Kansas in the 1930s. He was greatly respected as a clinical radiologist and was always genuinely concerned about his patients’ conditions. He taught me this when I was a child, before I was 10 years old.