If medicine is an art and science, gross anatomy, a topic typically covered early in medical school, represents both facets.

Dissecting a cadaver is certainly scientific. But no body is the same, with nature creating a unique canvas students can use to enhance their understanding during training.

Cathleen C. Pettepher, PhD, a professor of biochemistry at Vanderbilt University School of Medicine—one of 37 member schools of the AMA’s Accelerating Change in Medical Education Consortium—offers these tips for medical students as they begin their anatomy training.

**Nerves are normal**

In addition to being one of the more challenging aspects of preclinical training, anatomy may represent a sensitive point for many medical students.

At Vanderbilt, anatomy—rather than being a single course—is sprinkled throughout a medical student’s first year of training. The first foray into the anatomy lab typically uses a skin examination and observing and recognizing various skin conditions to help students adjust and adapt to their new learning environment. Before beginning dissection, students are made aware of what the cadaver laying before them represents.

“At the beginning of the very first anatomy laboratory session, we have a faculty-led memorial or celebration-of-life service, where we explain to the students the history behind the anatomical donation program, what a wonderful gift they are receiving and the expectations of conduct so that we are always respectful of the gift given,” Pettepher said. “The faculty presents readings and stories, often from the actual donors themselves, that explains why these individuals desired to give of themselves and become part of the students’ learning experience.”
“We also tell them it can be a very emotional experience, and for them to take their time and discuss their apprehensions about being in the lab with their faculty and peers.”

**Mastery comes with time**

Learning anatomy is different from many experiences a medical student has encountered in their undergraduate studies.

“They need to develop and use visual and kinesthetic skills,” Pettepher said. Those are skills that students may not have used often in their studies before, so it takes some time to adapt and to perfect this skill set. Students are also used to learning things very quickly. So, it can be frustrating to them that it takes more time to use this new skill set effectively to learn each structure and its function, and then integrate that knowledge with other materials that they are studying.

**Like medicine, anatomy is a team sport**

Several students work together at a lab table—at Vanderbilt, Pettepher said, dissection teams typically consist of four students. Working together as a cohesive unit will help them be successful with completing their dissections and learning from the structures that they have just uncovered.

“One of the things that we observe during lab is how they [students] work together as a team. Throughout their careers they will be a member of a healthcare delivery team,” Pettepher said. “They are accountable to the team, (showing up and participating in lab sessions) and they are responsible for their own learning as well as the entire team’s learning.

“It’s important that you learn to share the workload and balance your learning with the strengths of others. When there’s a member who is weak or struggling in learning a given area, you should take the responsibility to help learn the material (through review and quizzing) as well. Helping and teaching others enhances your learning and when you have a strong team, you work better together and are able to accomplish more.”

**Do the legwork**

Success in anatomy means you can apply the knowledge beyond the lab. That means doing the prelab reading, attending lectures and watching any videos that can prepare you for your next dissection.
“It’s very hard to be a standby participant in the anatomy lab,” Pettepher said. “By being invested in the dissection and learning process, you’ll make better connections to the material that you have learned outside of the anatomy lab. Previewing what you’re going to do in the lab will help you be prepared for the day’s tasks. And reviewing and quizzing, after you have identified relevant structures, will help you make these associations and enhance your recall of the material at a later time.”

**Mistakes are OK**

There’s a level of resilience that is necessary to succeed in anatomy, Pettepher added.

“Students have to be up to the challenge to dissect and discover the unknown. They need to not be afraid to make mistakes,” she said. “Often, students are reluctant to begin a dissection, especially early on, because they are afraid they are going to cut something [they aren’t supposed to]. The whole experience is about uncovering and identifying structures, observing how these structures are in association with other structures nearby and then based on those observations, determine function. You can’t do this without cutting and exposing structures. So it’s OK when mistakes are made.”