

# It's more than a computer can deliver: Gross Anatomy—A rite of passage and a right to learning

By William E. Scheckler, MD

**F**orty years have passed since I was a first year medical student, but the beginning of medical education has remained stable. First-year students are introduced to their cadaver. They are arranged in teams of four or five students. They begin as medical students have begun for over 100 years, by dissecting and exploring the easily visible, so-called “gross” anatomy of the human body. The first look at the face, the hands, give the same panoply of reactions as those looks always have—a combination of trepidation, wonder and curiosity.

Recently a debate in medical education circles has taken on some vigor. “Gross Anatomy lab takes up too much student time,” some say. “Three-dimensional computer programs can impart the necessary anatomical facts more efficiently.” Even a recent magazine article highlighted this debate.<sup>1</sup> Some say it is too hard to get the donated bodies; a colleague from Glasgow, Scotland said as much when he explained that his medical school had abandoned the gross anatomy dis-

section in favor of dry labs. Oh, the short-sighted horror of these thoughts!

In the fall of 2000, I spent a great deal of time with my “classmates” in the gross anatomy lab as the Class Mentor for the University of Wisconsin Medical School Class of 2004.<sup>2</sup> My return to the “gross lab” was fascinating.

To all those who would abandon the hands-on dissection of a human cadaver, I offer my own top 10 reasons why this medical rite of passage remains essential to medical education.

1. The presence of the cadaver indicates a donation decision

shoe kidney. Gall bladders can be hooked up in multiple ways. Each team shares this diversity with the other groups.

4. Human pathology is introduced in a very real way, from the widespread metastatic disease not even mentioned on the cadaver's death certificate (a lesson in databases!) to a host of other effects of easily discernible illnesses—the CVA, the coronary occlusion.
5. The interventions of modern surgery are evident. Seven of our 26 cadavers had had coronary artery bypass grafts—their internal thoracic vessels were in

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made in life. The cadaver represents that intangible reality of a lifeless body and the respect all physicians must develop for both the body and the person.

2. The dissection reveals both the complexity of anatomy and its simplicity—the tendons of the hands, the ossicles of the ear.
3. Human anatomy is diverse; anomalies occur; variety is reality. My cadaver had a horse-

the wrong place. “Doctor Scheckler, why is the kidney down here in the groin?” “Oh, a kidney transplant.” Not to mention the artificial hips and knees!

6. Student doctors gain real “hands-on” knowledge of organ location to aid in the development of their physical exam skills and to learn the right approaches for surgery and diagnostic interventions.

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The Anatomy Lecture of Dr. Nicolaes Tulp  
 Rembrandt van Rijn, 1632 (130 Kb); Oil on canvas, 169.5 x 216.5 cm; The Hague, Mauritshuis

Consider the lumbar tap on a cadaver—not a bad place to begin such skill development.

7. Posting modern medical imaging around the lab and going from CT or MRI to the three-dimensional cadaver and back again is a perfect introduction of these modern diagnostic imaging tools.
8. The lab develops teamwork: learning together, sharing responsibility in preparing for the morning's dissection, helping each other study for exams.
9. A memorial service allows students to pay tribute to the person who made this generous contribution to their education. Our class held this an-

nual service at the course's conclusion. It included music performed by students and written comments by students, the course director, and a man whose wife had donated her body to the school and who planned to do so himself. I was able to say a few words, too, moved by the knowledge that my deceased mother-in-law and her husband had donated their bodies to the University of Wisconsin Medical School.

10. Finally, the Gross Anatomy lab is a rite of passage that connects students with generations that have gone before. This shared experience is one that unites us as a profession.

Computers are very important tools in medical education, indeed in all education. Computer representation of normal anatomy is useful to the medical student. But the computer cannot begin to offer the same level of learning that occurs from hands-on dissection of a cadaver. A lack of cadavers and a paucity of gross anatomy faculty are solvable problems. For the reasons stated above, it is essential for traditional Gross Anatomy to survive!

#### References

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