



GEORGETOWN UNIVERSITY



Market: Medical

Customer: Georgetown University Medical School (GUMS)

Problem: The Client was encountering dramatic decreases in the availability (and increase in cost) of cadavers for their extensive and comprehensive “hands on” training of human anatomy. Georgetown needed to fill this void with a training solution that could support its existing curriculum.

Solution: Working in conjunction with leading, tenured professors and doctors at Georgetown University Medical School, Bridgeborn created content that could be delivered via the web (blackboard) or used in the classroom as part of their curriculum. The training solution used Bridgeworks® to power high fidelity (photo-realistic) 3D renderings of the lower arm. Using effects such as animations and dissolves of the skin, the deliverable taught students complex motions and movements including flexion and extension of the hand as well as pronation of the arm. Additionally, interaction between the web page and the 3D scene allowed students to click on any term and have it highlight in the appropriate bone, muscle etc. in the 3D scene.

Value to Client: Bridgeborn’s deliverable reduced Georgetown’s reliance on costly and scarcely available cadavers, saving the school money and allowing the professors to focus on training and education. Additionally, the interactive, 3D scene reduced training and education time by allowing both professors and students to visualize and interact with complex motions and movements traditionally difficult to teach or understand through text books and static, 2D content.

Services Provided	
	Analysis
	SDE&I
✓	Data Visualization
	Support Services
✓	Training and Education
	Research and Development

Human Anatomy: The Hand

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The Bones

In this lecture, we will concentrate on the hand. Because of the importance of manual dexterity in many activities, a thorough understanding of the hand is essential.

You may rotate and inspect the 3 dimensional hand on the right by dragging it in the window with your mouse. You may also see the relationship of the anterior surface of the hand to the bones underneath by clicking "3D Dissection" on the right. Click "Bones" to see the hand with no skin.

We will start our study with a review of the shape of the hand.

There are 8 carpal bones, 5 metacarpals, and 14 phalanges. Many of these bones can be felt in your own hand and this will facilitate learning their names and location.

The carpal bones may be considered to be a 2' row, a proximal and a distal row. The distal row from medial to lateral includes the trapezium, trapezoid, trapezoid, and trapezium. The proximal row from medial to lateral includes the scaphoid, lunate, triquetrum, pisiform, and scaphoid.

Left-click to rotate Right-click to zoom

Next Help

Skin 3D Dissection Bones