

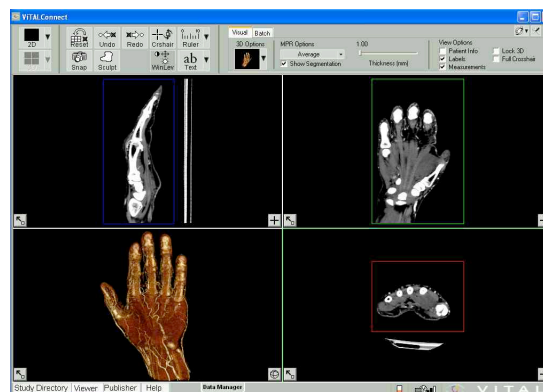
WEB-BASED INTERACTIVE 3D VISUALIZATION OF CADAVER CT SCANS TO ENHANCE ANATOMY AND RADIOLOGY EDUCATION

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Introduction: The use of modern medical imaging tools and interactive 3D visualization of anatomy in the dissection laboratory enhances medical students' learning of anatomy and radiology.

Methods: A new 6-week intensive collaborative course in anatomy and radiology was designed to provide early clinical and subspecialty relevance to the basic science medical school curriculum. Volumetric high-resolution CT scans were obtained of the cadavers used in the dissection laboratory after the embalming process was complete. A sophisticated, web-based visualization technology (ViTALConnect®, Vital Images Inc, Minnetonka, Minnesota, USA, www.vitalimages.com) was utilized to provide multiplanar reformations and three-dimensional volumetric color renderings of the CT scan data at the tableside in the anatomy laboratory and during classroom instruction. This system was also utilized to demonstrate normal anatomy on de-identified clinical examinations (CT, MRI, plain film etc.).

Results: Interactive visualization of cadaveric anatomy through radiologic studies provided an additional mechanism by which students can learn anatomic relationships and the appearance of structures on radiological studies. Early hands-on exposure to advanced visualization techniques prepared students to use the tools that will be more commonly available for clinical care in the future and added both relevance and excitement to the radiology portion of the curriculum. The web-based visualization system utilized in this course also allowed students to review the normal radiologic studies outside the anatomy laboratory and interactively view these examinations as reference for other coursework in physiology, physical examination and pathology.



Interactive multiplanar reformations and 3-D renderings available to students

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Acknowledgments

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