

Kudos

Brion Benninger, MD, MSc, Professor, Executive Director, Medical Anatomy Center, Healthcare & Education Futurist hosted and taught medical skills 'Tomorrowland' CME course on Saturday, Jan. 12, 2019 integrating innovative medical technologies and teaching techniques for PA students from Pacific University and Pre-med students from University of Oregon. Several hands-on teaching stations included conventional ultrasound, handheld ultrasound (GE and Lumify), transesophageal ultrasound (CAE), and wearable ultrasound (Sonivate) with a novel dual plane finger probe identifying vessels, common bone fracture regions and eFAST exam. He used CAE Blue phantom simulators to teach point of care ultrasound using echogenic needles for learners to track needles under the skin for difficult blood withdrawal, delivering safe vaccinations and injections of anesthetic. He and Jonathan Mang, Paramedic, Albany Fire & Rescue taught video laryngoscope intubation with Eagle Vision and MacGrath technology on lifelike 7-Sigma hi-fidelity simulators. They provided lifelike cricothyrotomy procedures on a novel apparatus which Dr. Benninger is providing feedback for further development by 7-Sigma. He used Sectra, an interactive table which acts essentially as a smartphone with a 50inch touchscreen interacting with 3D rendered CT/MTRI images. Students swiped, scrolled, zoomed, rotated, and navigated inside the images, as well as remove layers of skin and muscle and dissect the body with a virtual knife. Benninger uses problem-based learning and develops critical thinking which is a skill every healthcare provider requires. He uses Sectra to teach and improve ultrasound skills by all students. He discussed, and demonstrated benefits of Google Glass in healthcare.

He also revealed vascular images of the human not previously viewed using a novel contrast medium prior to conventional CT and MRI scans on donor cadavers conducted by Samaritan Lebanon Community Hospital radiology department. These images were placed on the Sectra table where students interacted with the novel images benefitting from the teaching tools of the Sectra technology.

He had a Toltech Opus Mini robotics haptic simulator set up for femoral and scalene blocks incorporating 3D point of care ultrasound skills.

He also introduced everyone to a new chest tube insertion technology by Reactor which is far superior to conventional methods of chest tube insertion.

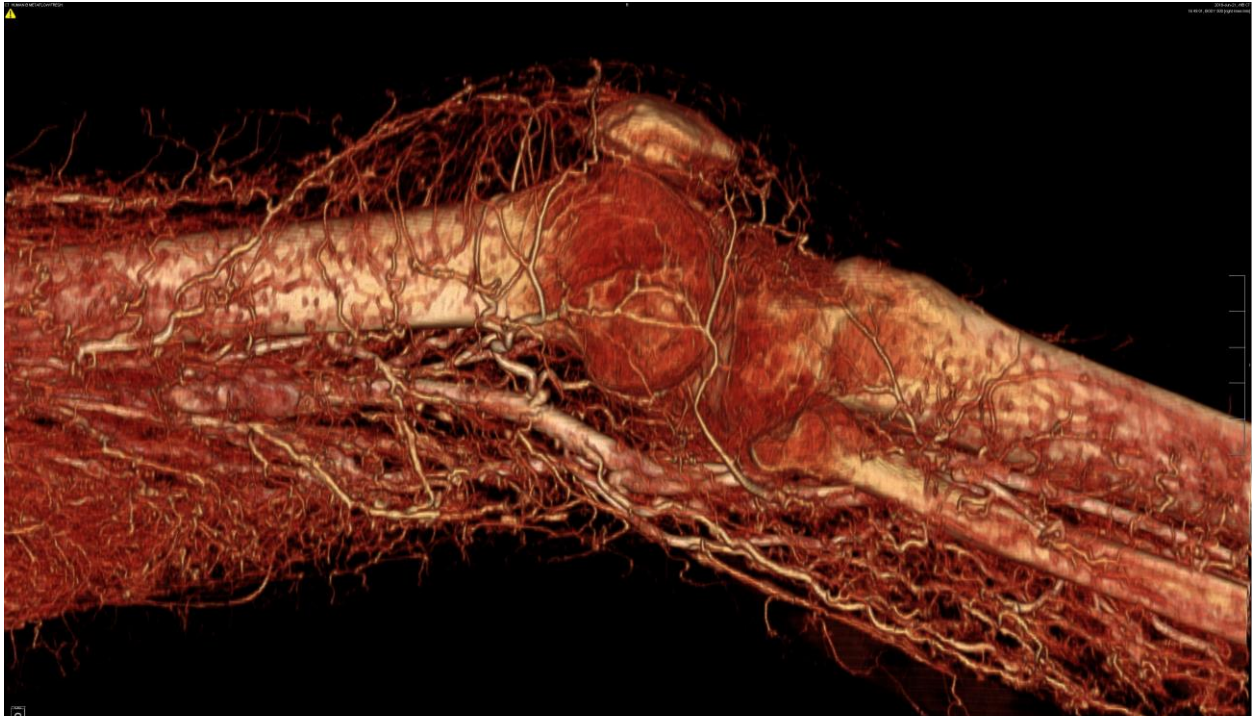
Dr. Benninger wanted to acknowledge COMP-Northwest medical students Lauren Eickelberg, Molly Petersen Robert Woodruff and Mackenzie Murphy for helping teach and for their professionalism which made this a memorable experience for their PA colleagues and future healthcare providers. Special thanks to Marty Cahill CEO Samaritan Lebanon Community Hospital for enabling CT and MRI imaging of the novel contrast agent and technique.



PA students, Univ. of Oregon premed students and COMP-Northwest Students learning to intubate with Eagle Vision videolaryngoscope inside the Medical Anatomy Center



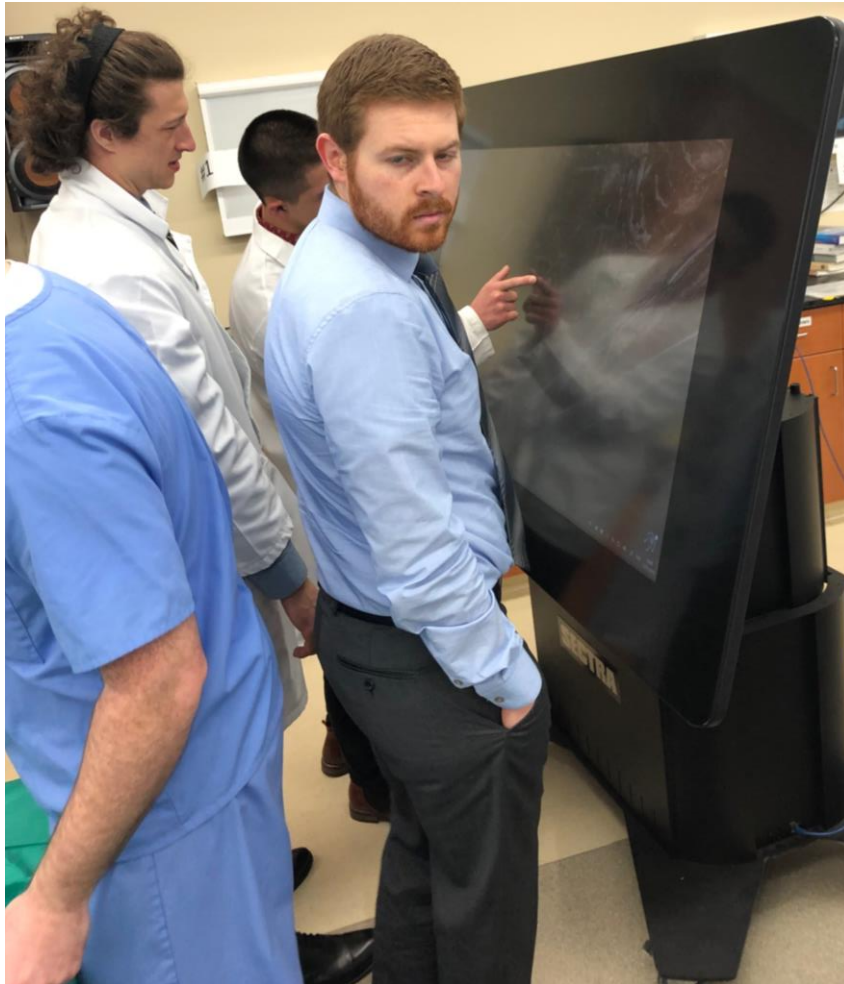
Conventional arteriogram of the knee



Novel contrast agent with Benninger-Echols technique revealing vasculature of the knee



PA students, Univ. of Oregon premed students and COMP-Northwest Students learning to track echogenic needles for regional anesthesia using GE & Lumify handheld ultrasound systems.



PA students, Univ. of Oregon premed students and COMP-Northwest Students interacting with novel vascular images with the Sectra