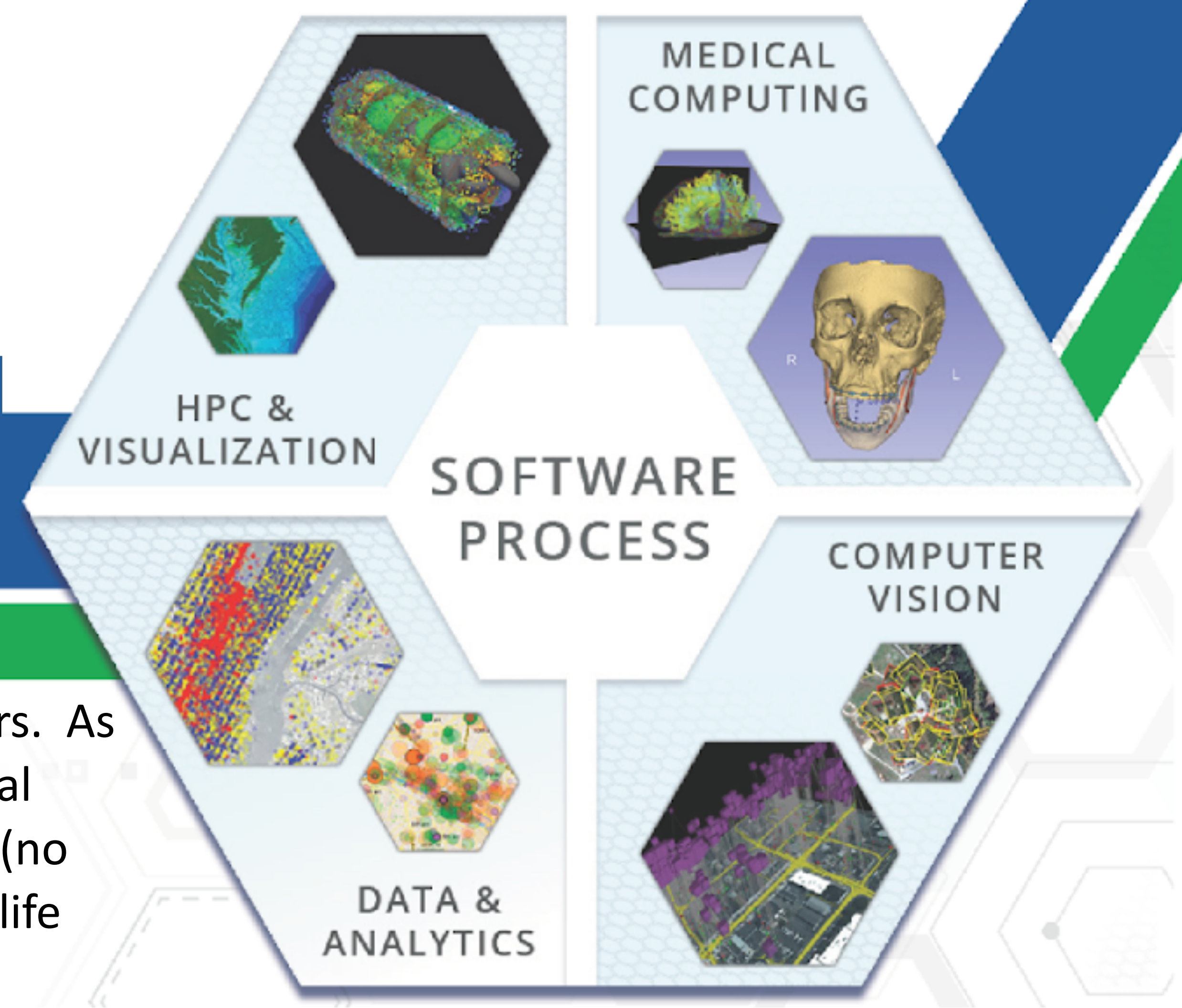


R&D services specializing in advanced technical computing, state-of-the-art AI, and professional software development

kitware@kitware.com

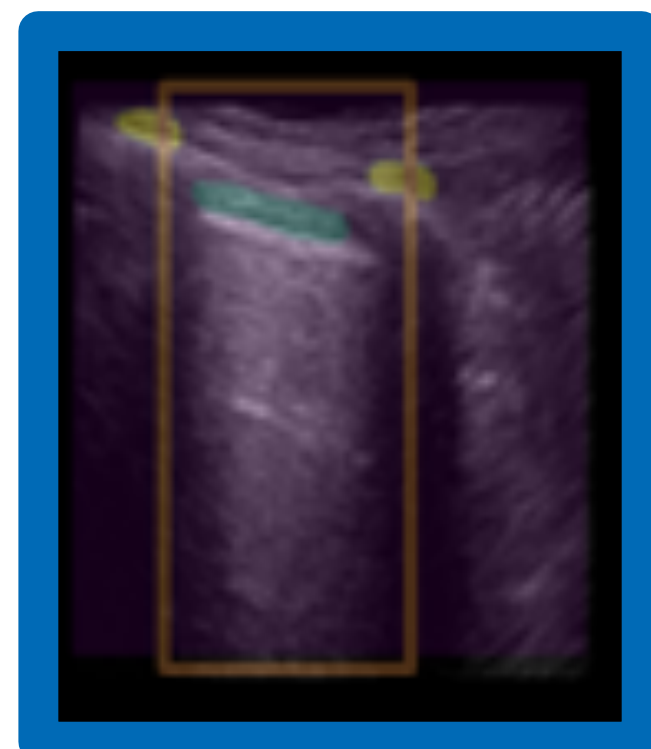
Kitware provides best-in-class open source and open science research for our government partners. As an MTEC M-Corps provider, we offer a great track record in grant-teaming and professional medical technology and software development services. Our commercial partners own their source code (no licensing) and intellectual property. We can help at any stage of the commercial medical product life cycle: from initial R&D to IEC 62304 and HIPAA -compliant product development.



Kitware & DukeHealth AI-assisted Point-of-Care Ultrasound and Related Projects



Self-contained tracking for scoliosis



PTX

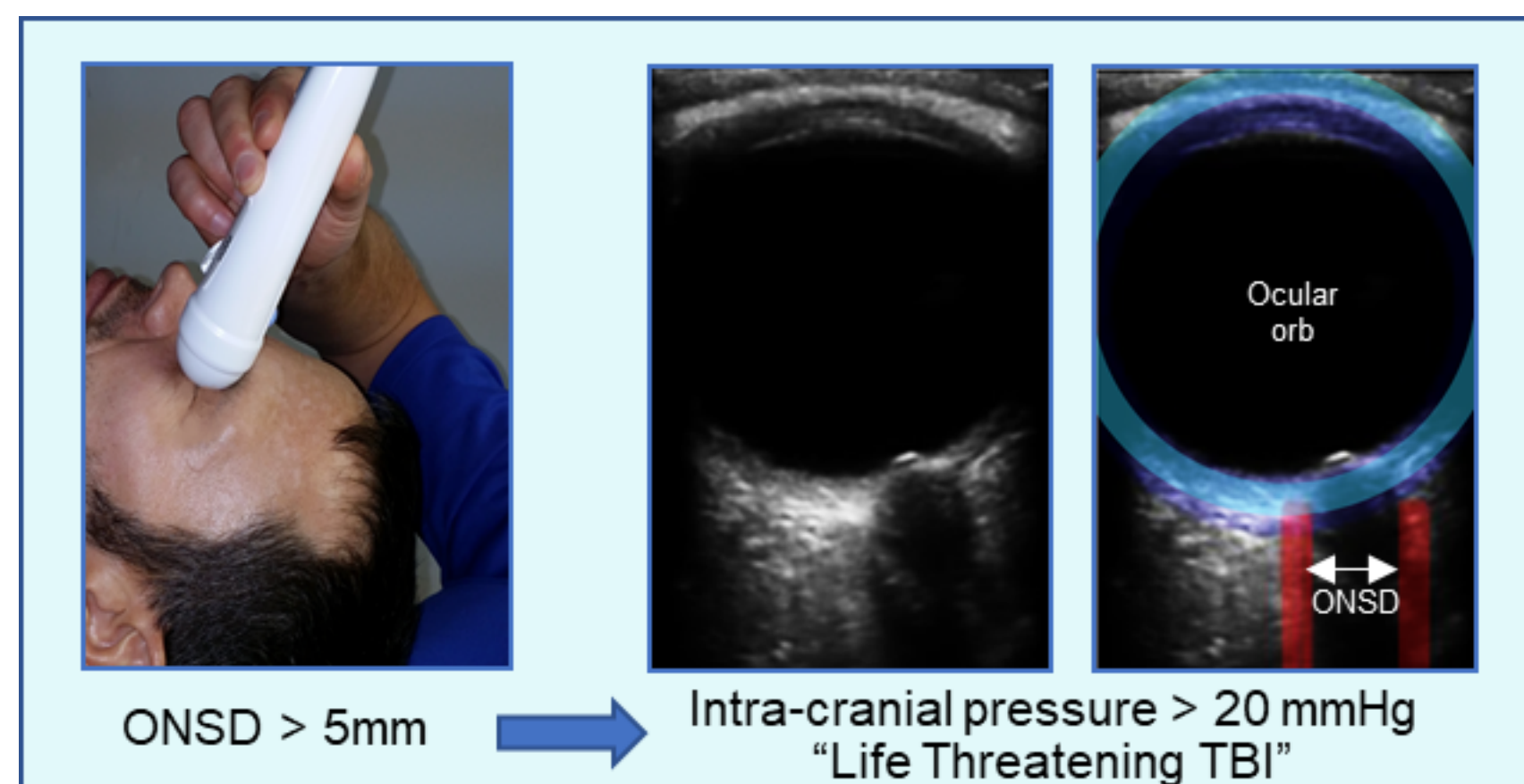


AR and automated E-FAST: US spectroscopy

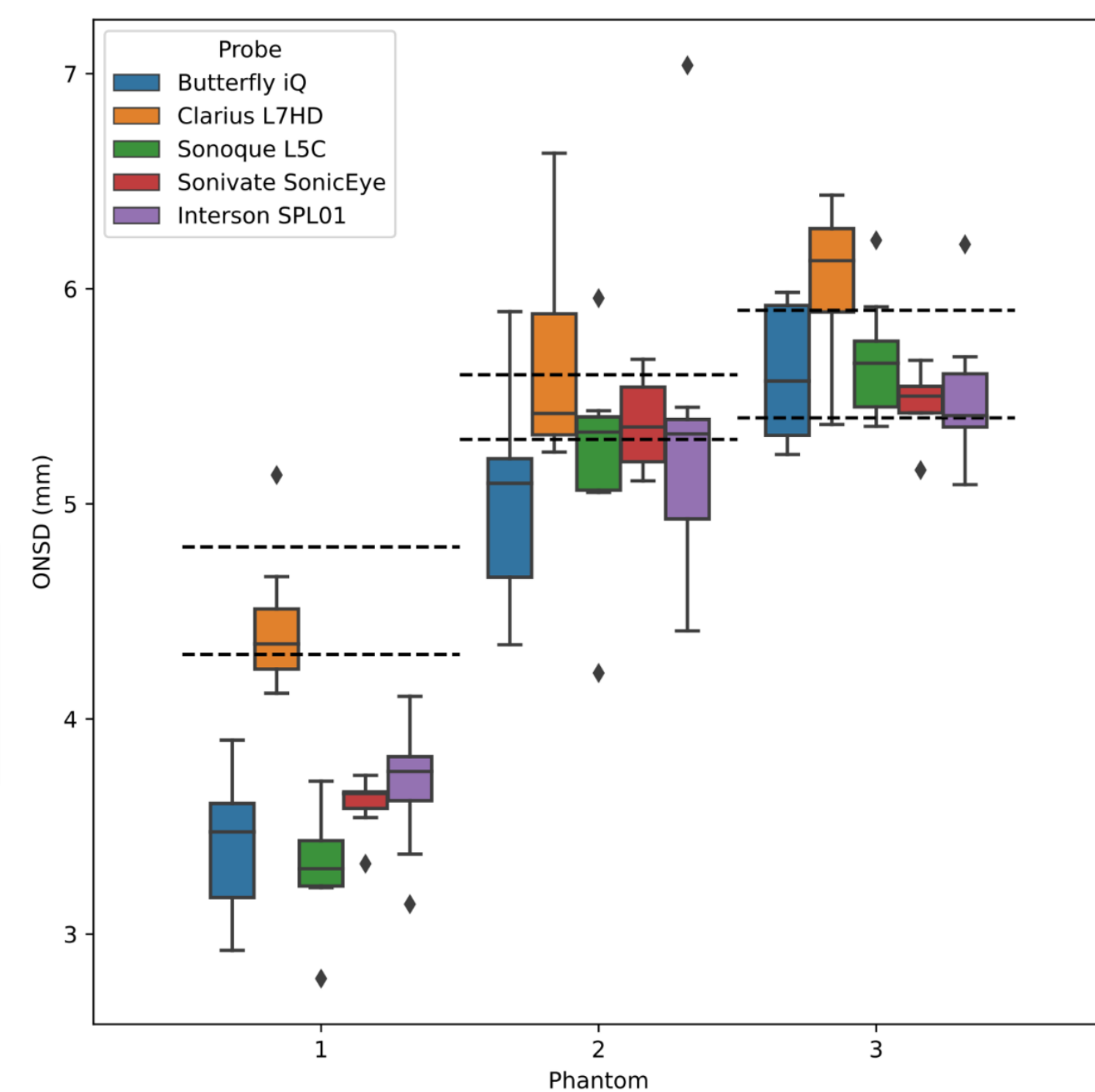
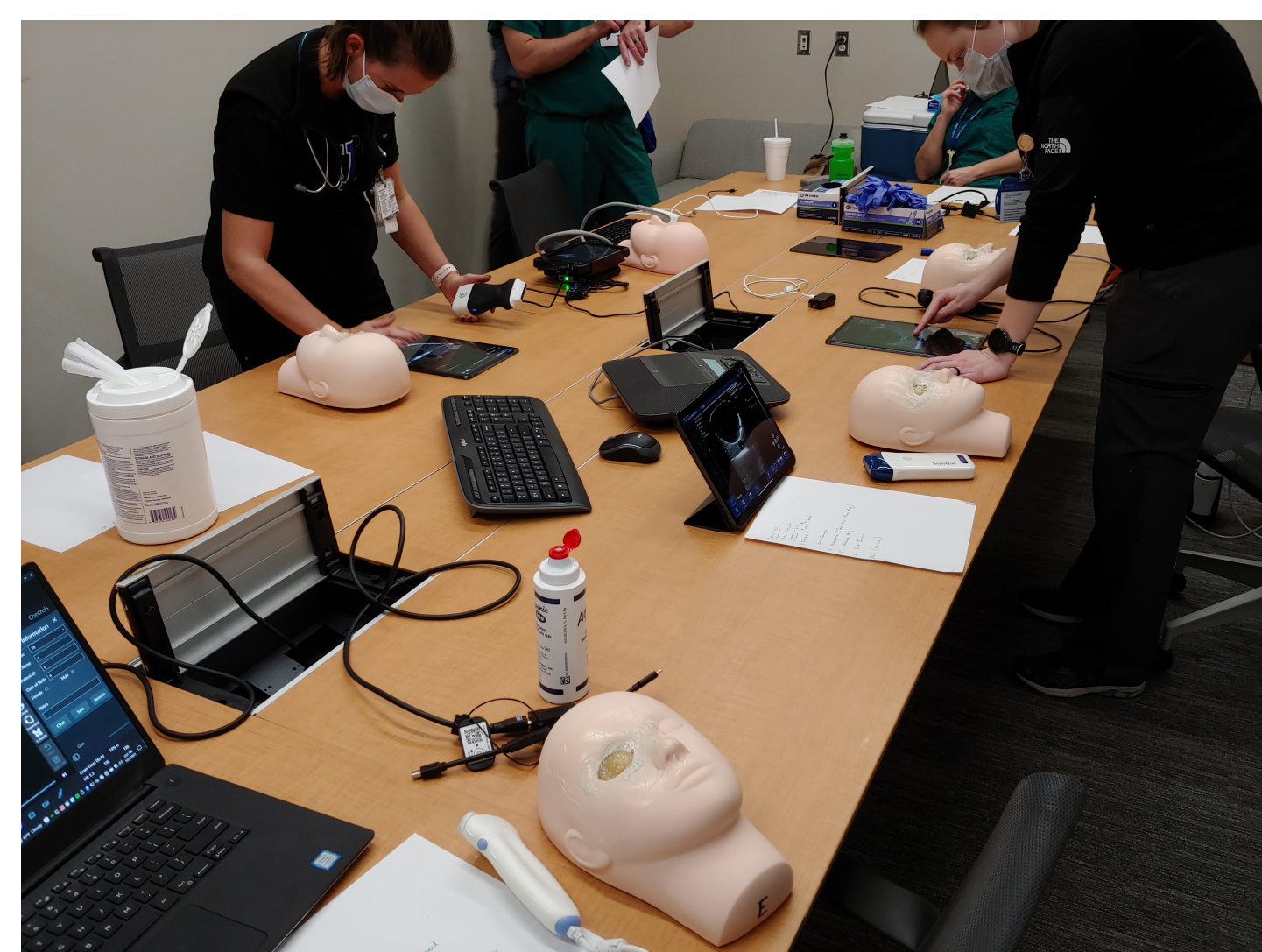
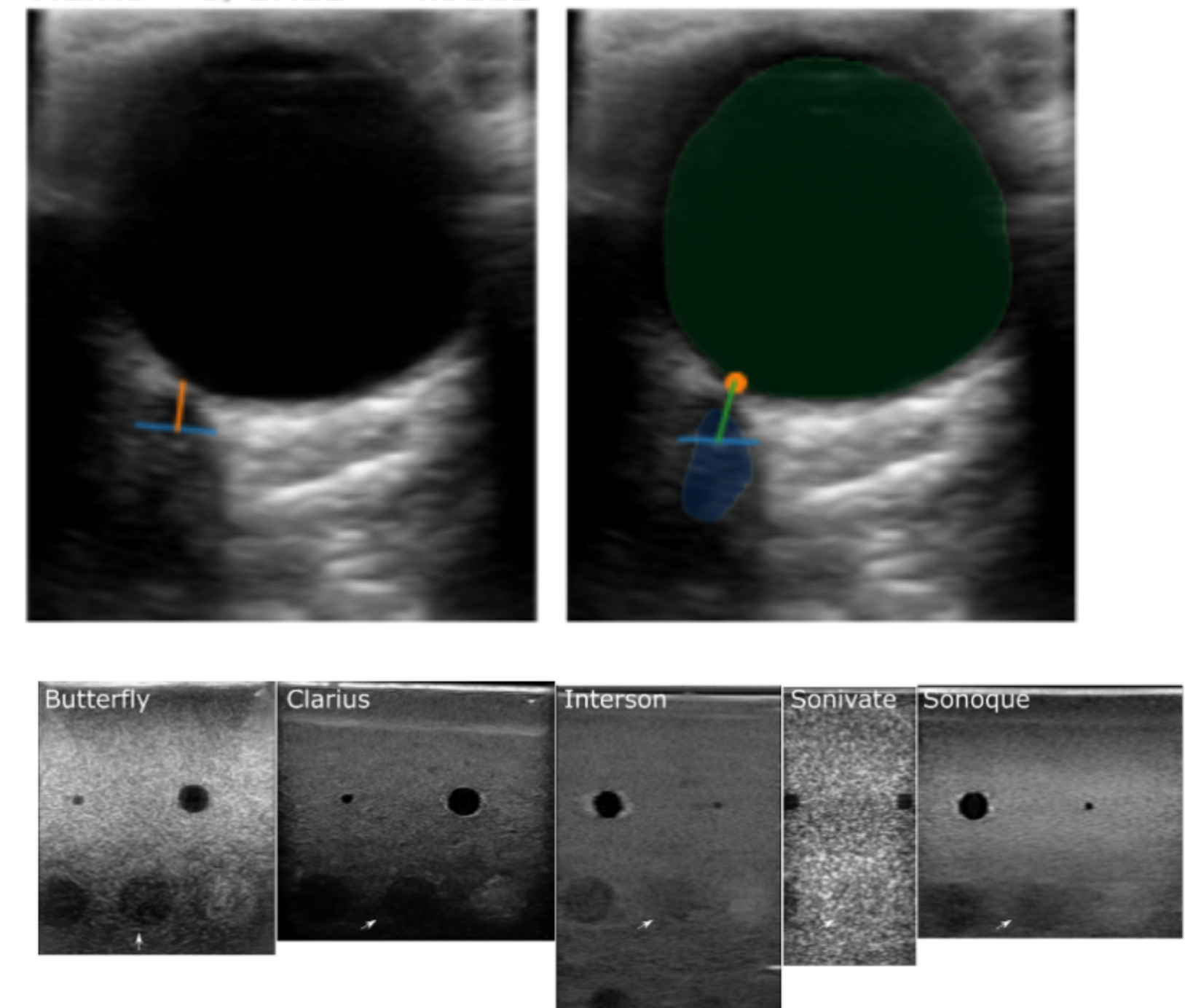
- TBI / ONSD
- Peripheral Nerve Block
- Intubation
- Liver Cirrhosis / US Spect.
- COVID / Multi-Scatters
- Prostate / ARFI / SWE
- Tumor / Microbubbles
- Brain tumor resection
- Liver lesion RFA

Non-invasive Triage of Severe TBI

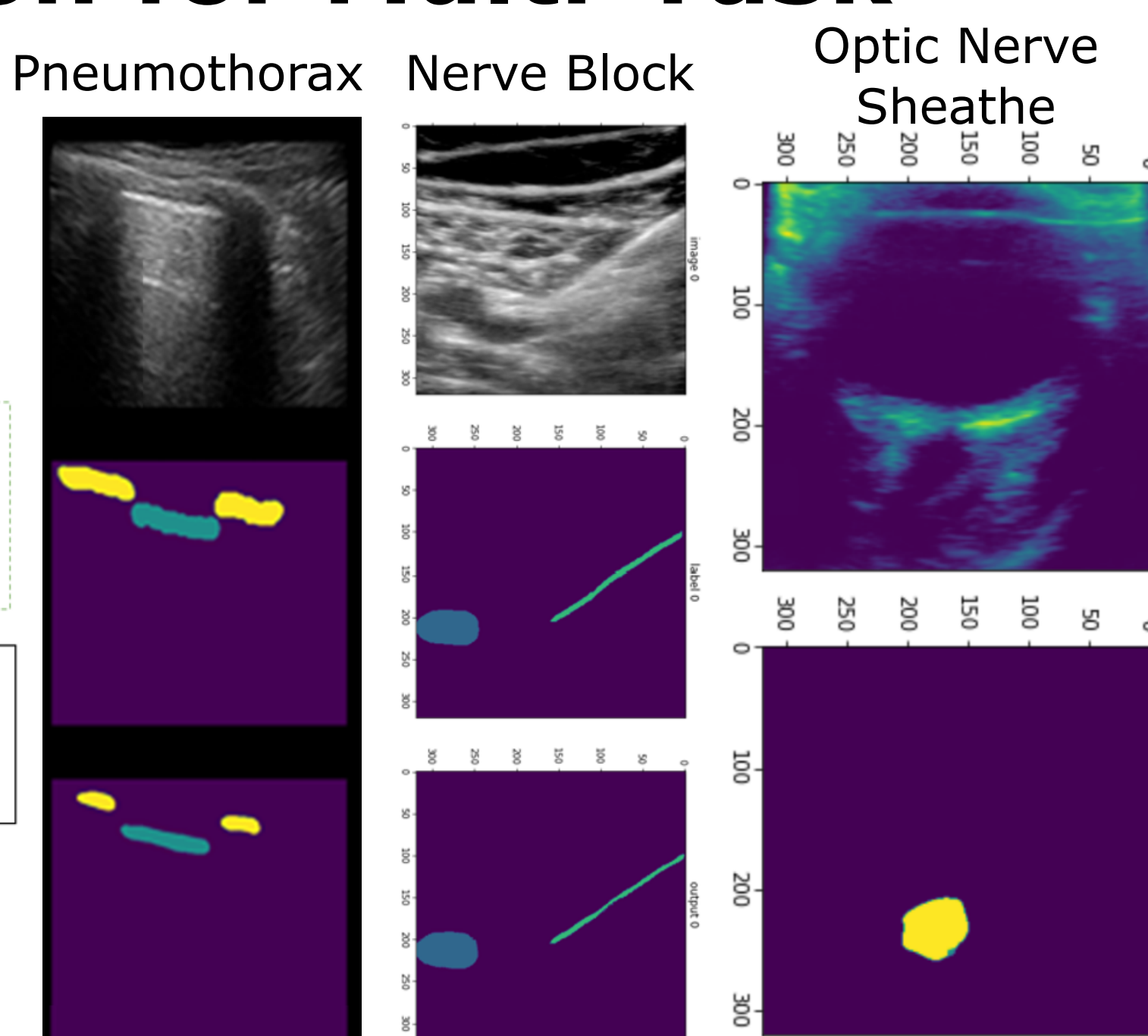
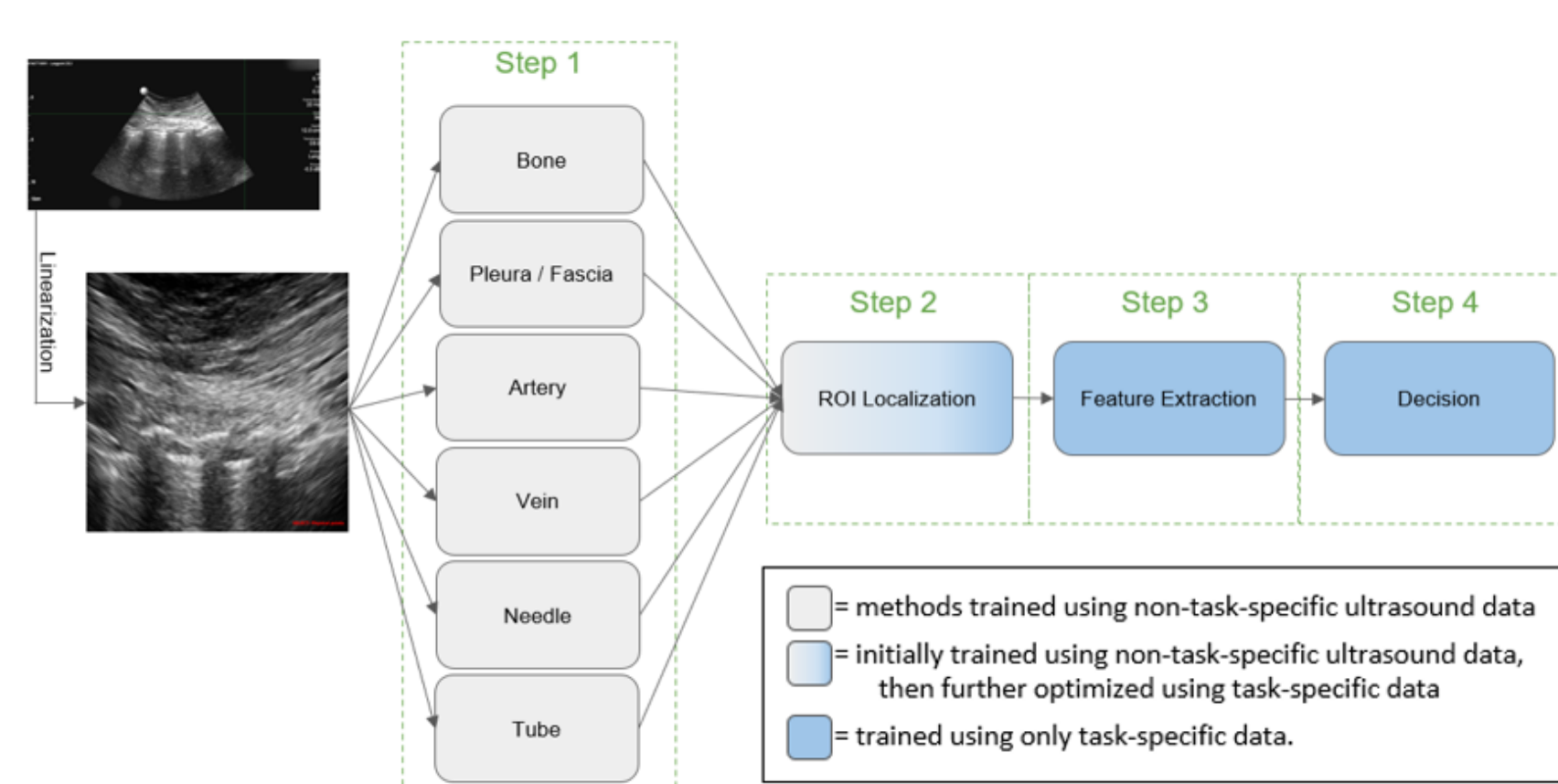
- Detect life-threatening elevated intracranial pressure
- AI-assisted ultrasound of the optic nerve sheath
- Designed to run on off-the-shelf point-of-care ultrasound
- Ongoing clinical study with healthy and TBI patients
- Future steps: user-guidance, full-system trials



Manual Frame = 0, ONSD = 4.9162
AI ONSD = 4.800

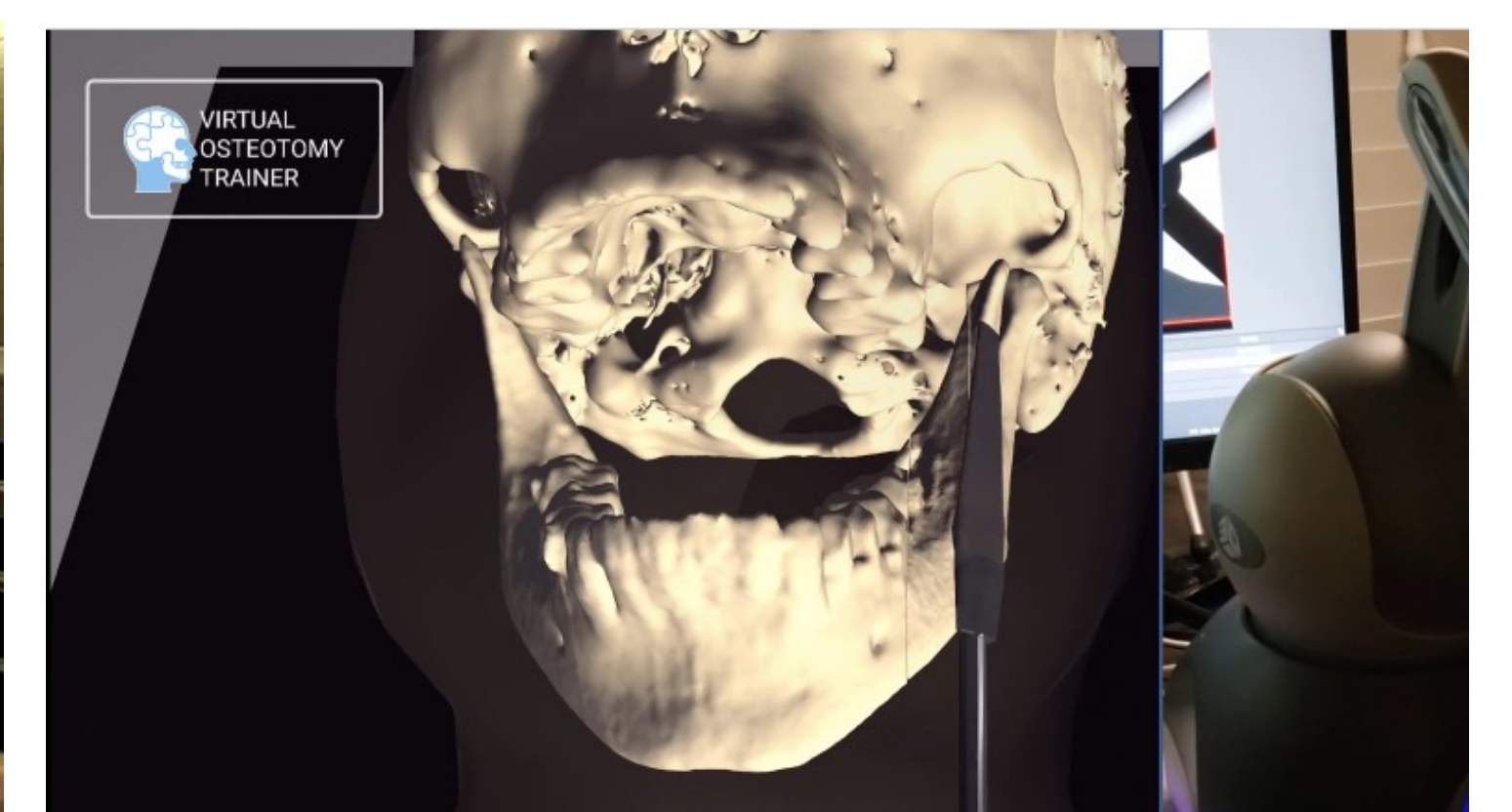
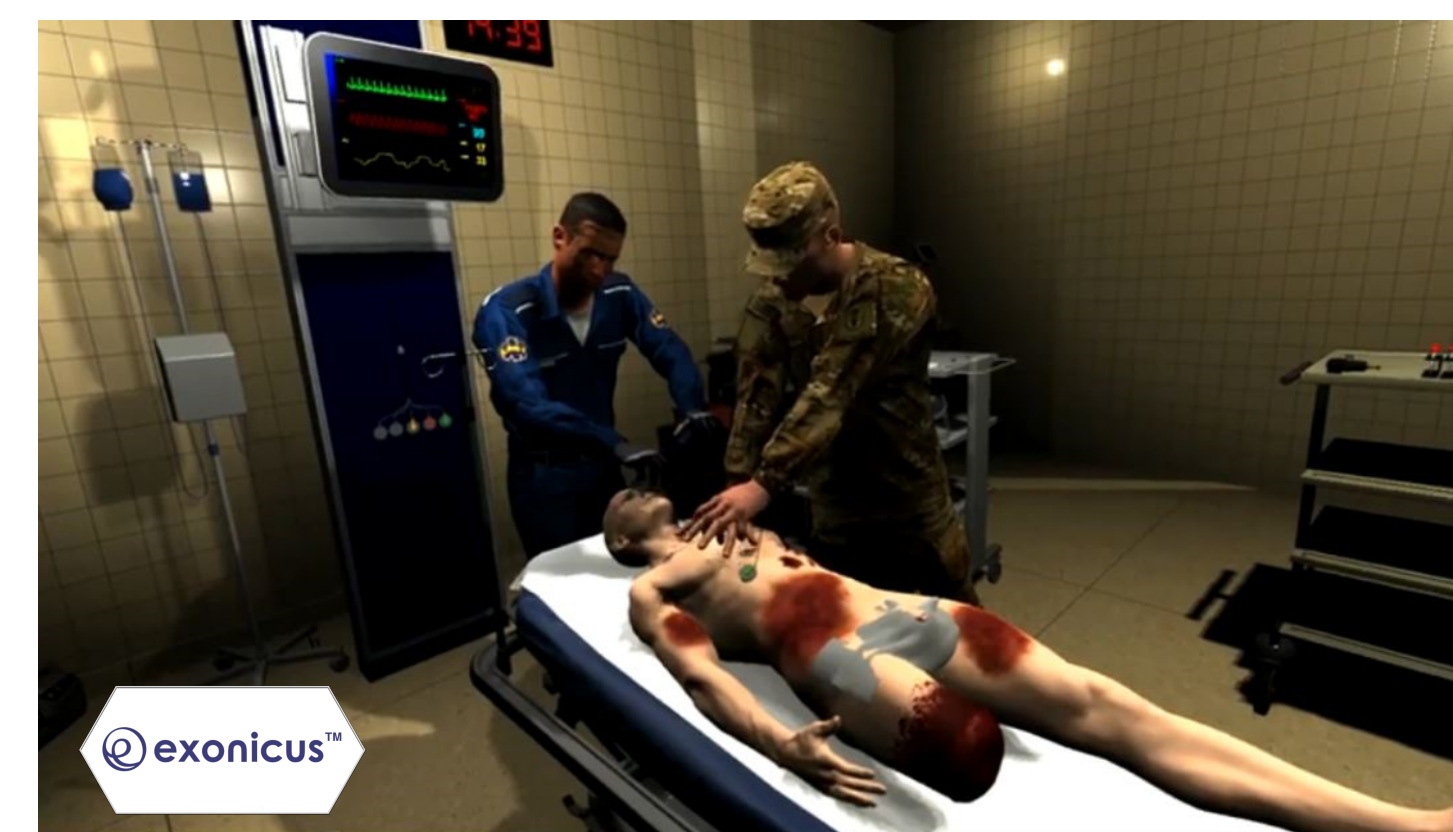


Anatomic Reconstruction for Multi-Task Trauma Ultrasound



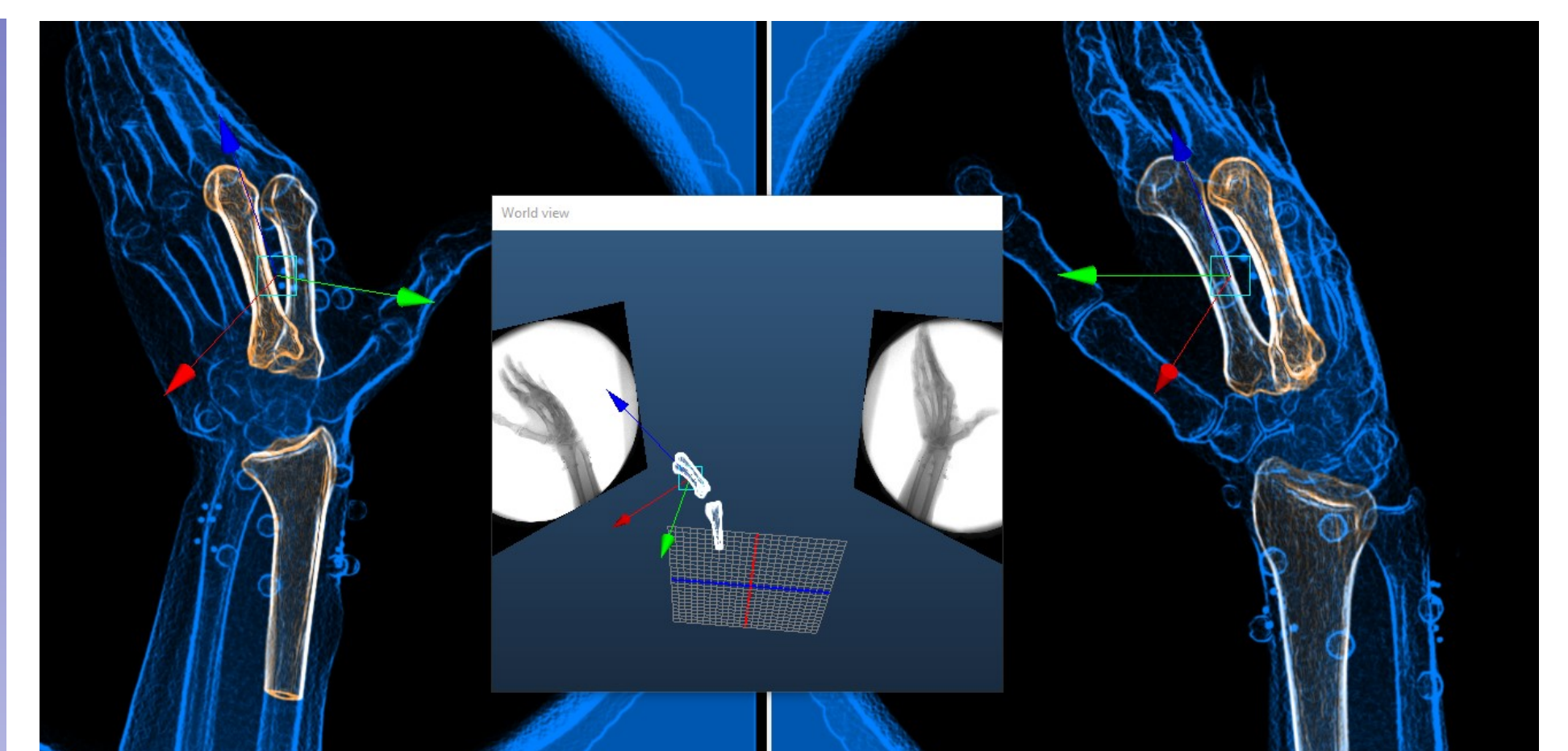
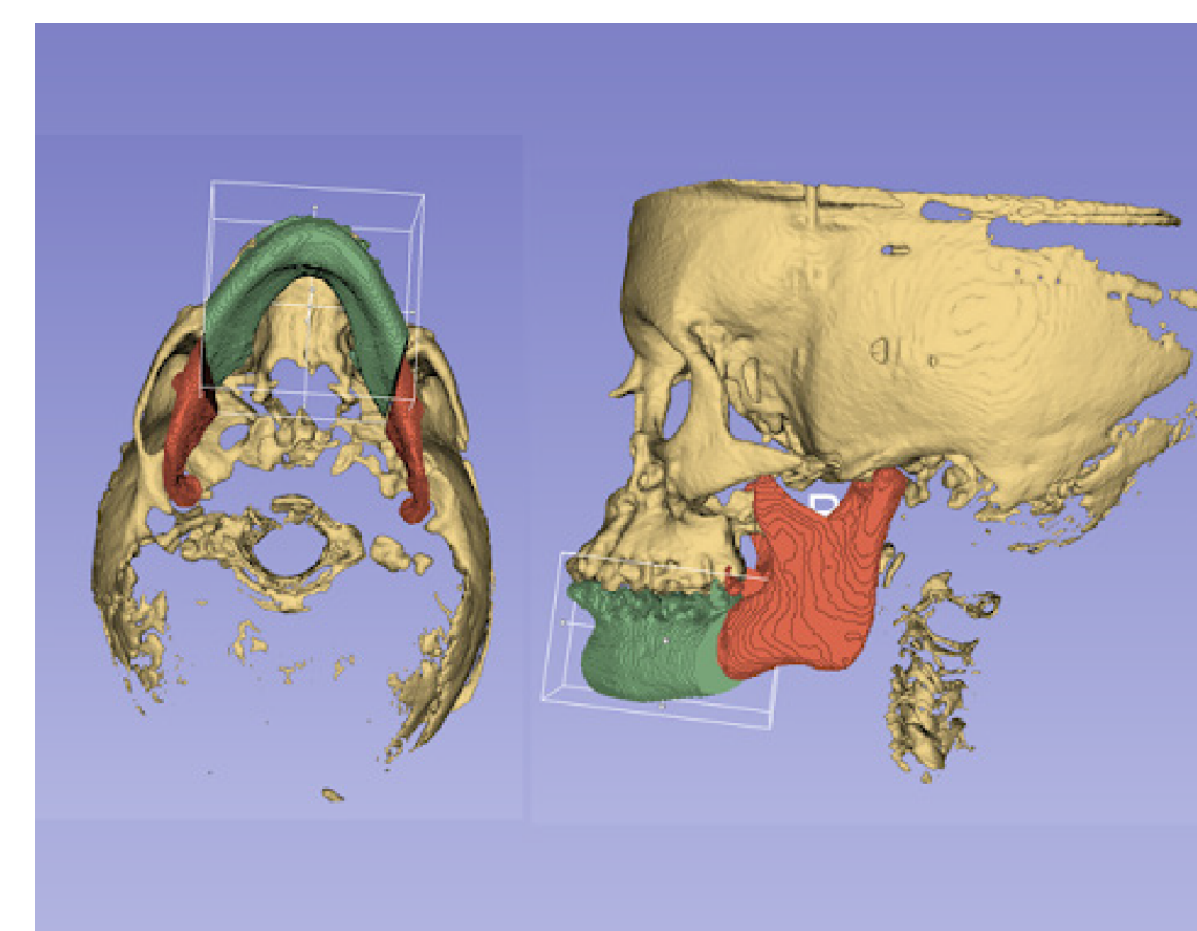
Virtual Training Simulation and Informatics

- Holographic, VR, and AR displays
- Virtual surgical simulation and training
- Electronic health records and trauma registry analysis



Musculoskeletal and Craniomaxillofacial Analysis

- Severe trauma musculoskeletal and craniomaxillofacial surgical planning
- Predict risk-of-injury under load
- Patient-specific return-to-duty recommendations



Pulse: Human Physiology Simulation

- Comprehensive physiology simulator
- Virtual clinical trials
- Digital twin simulation
- Script-free medical simulation

