

## Critical Care Neurosonology Symposium for 50th year celebration of Wake Forest Ultrasound

**Date:** May 30th, 2025

**Location:**

Virtual.

Registration:

[https://vcuhealth.zoom.us/webinar/register/WN\\_y\\_82Fr6aR\\_OwzhFHwCxAOw](https://vcuhealth.zoom.us/webinar/register/WN_y_82Fr6aR_OwzhFHwCxAOw)

**Course co-Directors:**

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### Proposed Agenda

Time	Title	Topics and Objectives	Speakers invited
<b>SESSION</b>	<b>ACUTE BRAIN INJURY</b>		
15 min Lecture	Cerebrovascular hemodynamic assessment with TCD in Critical Care	<ul style="list-style-type: none"> <li>- Physiology and variables influencing TCD metrics.</li> <li>- Waveform interpretation</li> <li>- Collateralization evaluation</li> </ul>	TBD
15 min Lecture	Delayed cerebral ischemia evaluation with TCD	<ul style="list-style-type: none"> <li>- Evolution and summary of literature</li> <li>- Interpretation of TCD metrics</li> <li>- Comparison of TCD to other modalities</li> <li>- Aneurysmal and non-aneurysmal SAH</li> </ul>	Erika Sigman, MD
20 min Lecture	Autoregulation assessment with TCD	<ul style="list-style-type: none"> <li>- Mean flow index (Mx)</li> <li>- Non-invasive CPPopt</li> <li>- MAP challenge</li> <li>- Carotid compression test</li> <li>- Technique and confounders</li> <li>- Clinical applications</li> </ul>	Chiara Robba, MD PhD Andrea Bernadino, MD
15 min Lecture	Non-invasive ICP evaluation with TCD	<ul style="list-style-type: none"> <li>- Qualitative interpretation</li> <li>- Quantitative formulas</li> <li>- Technique, Confounders, Validation</li> </ul>	TBD
10 min	B mode neuro ultrasound	- Technique, Confounders, Validation	Denise Fraga, MD

Lecture	for cerebral edema assessment		Nathan Lightfoot, DO John Wright
10 min Lecture	Ocular ultrasound	<ul style="list-style-type: none"> <li>- Optic nerve sheath diameter</li> <li>- Papilledema, Terson's syndrome</li> <li>- Pupil reactivity</li> </ul>	Mohammad Hirzallah, MD, MMSc
20 min Lecture	TCD Brain Death	<ul style="list-style-type: none"> <li>- Technique, confounders, validation</li> <li>- Requirements and technical specifications</li> </ul>	Jimmy Suh, MD
15 min	Case studies Q&A		
<b>SESSION</b>	<b>SYSTEMIC CRITICAL CARE</b>		
15 min Lecture	TCD assessment of Encephalopathy in Critical care	<ul style="list-style-type: none"> <li>- Septic encephalopathy</li> <li>- Acute hypoxic respiratory failure and ARDS</li> <li>- Fluid overload and congestive venous encephalopathy</li> </ul>	Fabio Taccone, MD PhD Ilaria Crippa, MD PhD
10 min Lecture	TCD in Hepatic Encephalopathy	<ul style="list-style-type: none"> <li>- Evolution and summary of literature</li> <li>- Interpretation of TCD metrics</li> <li>- Confounders, Validation</li> </ul>	Mateusz Zawadka, MD PhD Alexandra Reynolds, MD
10 min Lecture	TCD in Acute and Chronic Renal Failure	<ul style="list-style-type: none"> <li>- Evolution and summary of literature</li> <li>- Interpretation of TCD metrics</li> <li>- Confounders, Validation</li> </ul>	TBD
10 min Lecture	TCD in Cardiac Arrest and Mechanical Circulatory Support	<ul style="list-style-type: none"> <li>- Waveforms and hemodynamics in MCS</li> <li>- Adult and Pediatric ECMO</li> <li>- TCD during and after cardiac arrest</li> </ul>	TBD
15 min	Case studies Q&A		