

22nd Emirates Critical Care Conference

"From Evidence to Excellence: The Future of Critical Care"

Neuro Ultrasound Skills and Interpretations Workshop

 **May 8 & 10, 2026**

 **InterContinental Hotel
Dubai, UAE**



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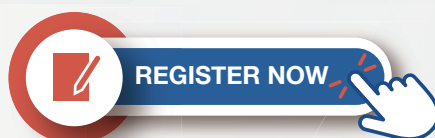
Panayiotis Varelas




Corina Puppo


Course Registration Fees

Physicians	1,000 AED	Non-Physicians	500 AED
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Summary

Transcranial Doppler (TCD) Ultrasonography is an essential instrument for cerebral hemodynamic assessment in acute cerebrovascular diseases. Its utility has been enhanced by the broader adoption of point-of-care ultrasound in critical care, leading to expanded clinical applications. This workshop is designed to impart both foundational knowledge and practical competencies necessary for the proficient use of TCD in neurocritical care. Participants will be instructed on the core principles of ultrasound insonation for cerebral hemodynamic evaluation with an integrated educational approach, combining didactic lectures with practical, hands-on training. This workshop will equip attendees with the requisite skills for image acquisition using temporal, occipital, submandibular, and orbital approaches. A case-based approach will be used to learn interpretation of intracranial hemodynamic waveforms and various clinical applications of TCD in neurocritical care. This workshop will allow 20 hours of continuing medical education credit including hands on and didactics and +50 cases that will qualify towards taking the American Society Of Neuroimaging RPNI or NVS examination. This content can also help prepare for the European society of Neurosonology and Cerebral haemodynamic certification.

Objectives

- Learn the fundamentals of physics and knobology required for Transcranial Doppler
- Acquire skills for image acquisition through temporal, occipital, submandibular and orbital windows
- Interpret TCD Findings in the context of neurocritical Care
- Recognize the clinical applications of transcranial Doppler in neurocritical care

Target Audience

- Physicians and trainees in anesthesiology
- Critical care
- Neurology
- Neurosurgery who manage patients at risk of acute brain injury in acute care settings

Workshop Outcomes

Participants will be able to perform image acquisition using temporal, occipital, submandibular, and orbital approaches. They will learn a structured approach to interpreting intracranial hemodynamic waveforms and understand clinical applications of Transcranial Doppler (TCD) in neurocritical care.

Paid Workshop - Entry by Registration Only

Neuro Ultrasound Skills and Interpretations Workshop

Day 1- 8 May 2026, Friday

Session		
07:00 - 07:30	Lecture: Introduction Ultrasound Physics Knobology- PRETEST	
07:30 - 08:00	Lecture: Introduction TCD essentials, principles and instrumentation	
08:00 - 08:30	Lecture: Waveform analysis	
08:30 - 09:00	Lecture: Image acquisition on windows - imaging vs non imaging	
09:00 - 09:30	Demo: Image acquisition basics all windows - imaging Doppler	
09:30 - 10:00	Demo: Image acquisition basics all windows - non-imaging Doppler	
10:00 - 10:30	Hands on practise Temporal windows	Faculty
10:30 - 11:00	Hands on practise Temporal windows	Faculty
11:00 - 11:30	Hands on practise Occipital windows	Faculty
11:30 - 12:00	Hands on practise Occipital windows	Faculty
12:00 - 13:00	Lunch	
13:00 - 13:30	Lecture: Clinical applications in subarachnoid hemorrhage	
13:30 - 14:00	Lecture: Cases studies for subarachnoid hemorrhage	
14:00 - 14:30	Lecture: Clinical applications in ischemic stroke (LVO, emboli, shunt, collaterals)	
14:30 - 15:00	Lecture: Case studies in ischemic stroke	
15:00 - 15:30	Hands on practise Submandibular windows	Faculty
15:30 - 16:00	Hands on practise Submandibular windows	Faculty
16:00 - 16:30	Hands on practise Orbital windows	Faculty
16:30 - 17:00	Hands on practise Orbital windows	Faculty
17:00 - 17:30	Lecture: Clinical application in intracranial pressure evaluation	
17:30 - 18:00	Lecture: Case studies in increased ICP evaluation	
18:00	End of Workshop - Day 1	

Neuro Ultrasound Skills and Interpretations Workshop

Day 3 - 10 May 2026, Sunday

Session		
07:00 - 07:30	Lecture: Vasomotor reactivity and autoregulation assessment	
07:30 - 08:00	Lecture: Case studies in VMR and autoregulation evaluation	
08:00 - 08:30	Lecture: Clinical applications in brain death evaluation	
08:30 - 09:00	Lecture: Case studies in TCD use as ancillary test	
09:00 - 09:30	Lecture: Clinical applications in Sickle cell disease evaluation	
09:30 - 10:00	Lecture: Case studies in sickle cell evaluation	
10:00 - 10:30	Hands on practise Temporal windows	Faculty
10:30 - 11:00	Hands on practise Temporal windows	Faculty
11:00 - 11:30	Hands on practise Occipital windows	Faculty
11:30 - 12:00	Hands on practise Occipital windows	Faculty
12:00 - 13:00	Lunch	
13:00 - 13:30	Lecture: Case studies in cerebral edema assessment	
13:30 - 14:00	Lecture: Case studies in stroke evaluation	
14:00 - 14:30	Lecture: Case studies in brain death evaluation	
14:30 - 15:00	Lecture: Case studies in pediatric assessment	
15:00 - 15:30	Hands on practise Submandibular windows	Faculty
15:30 - 16:00	Hands on practise Submandibular windows	Faculty
16:00 - 16:30	Hands on practise Orbital windows	Faculty
16:30 - 17:00	Hands on practise Orbital windows	Faculty
17:00 - 17:30	Billing coding generating a report for transcranial Doppler -POST TEST	
17:30 - 18:00	Examination, credentialling, certifications for TCDs	
18:00	End of Workshop	