

1ST PAN-ARAB CONFERENCE OF THE
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OF INTENSIVE AND CRITICAL CARE SOCIETIES



ESNCH



WORKSHOP

THE 20TH INTERNATIONAL



PAN
ARAB
CRITICAL CARE

MEDICINE SOCIETY CONFERENCE

NEUROULTRASOUND SKILLS AND INTERPRETATIONS



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30 JANUARY
2025



07:00 AM
18:00 PM



GRAND
HYATT HOTEL



16 CME
POINTS

www.criticalcarekuwait.com/2025



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:

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



WORKSHOP | NEUROULTRASOUND SKILLS AND INTERPRETATIONS

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.

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1-3 FEBRUARY
2025
KUWAIT CITY

PRE CONFERENCE
WORKSHOP
30 - 31 JANUARY

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**WORKSHOP TIMETABLE - Day:1**

07:00-07:30	Lecture: Introduction Ultrasound Physics Knobology- PRETEST	Aarti Sarwal
07:30-08:00	Lecture: Introduction TCD essentials, principles and instrumentation	Aarti Sarwal
08:00-08:30	Lecture: Waveform analysis	Aarti Sarwal
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	Aarti Sarwal
09:30-10:00	Demo: Image acquisition basics all windows - non-imaging Doppler	Aarti Sarwal
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	

10 hours including 4 hrs scanning time



WORKSHOP TIMETABLE - Day:2

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**

10 hours including 4 hrs scanning time