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Workshop

NMW
Non-invasive Neuromonitoring

**IMPORTANT NOTICE: access is limited to pre-registered delegates.

About this workshop:

Monday
26 May 2025
09:00 – 12:10

Room Madeira

Neuromonitoring is essential to sustain a brain protective approach in real-world clinical settings. This workshop combines instruction in the latest techniques of

- Transcranial Doppler (TCD),
- Optic Nerve Sheath Diameter (ONSD) measurement,
- non-invasive regional cerebral oximetry using Near-Infrared Spectroscopy (NIRS)
- and Electroencephalography (EEG)

with an opportunity to implement new skills in guided hands-on sessions on living models. Personalised tuition to all skill levels and expert feedback in real-time will be provided.

During this workshop participants will learn basic principles, applications and indications of TCD; such as assessment of cerebral perfusion and autoregulation, estimation of Intracranial Pressure (ICP), diagnosis of cerebral vasospasm, and brain death.

Additionally, ONSD-guided assessment of elevated ICP, NIRS-guided prediction of cerebral ischemia, evaluation of regional oxygen supply and oxygen consumption balance, as well as cerebral autoregulation will be taught.

A basic understanding of EEG, including the differences between the various monitors available today and their respective pros and cons, will be provided.

Spectrogram analysis and different anaesthetic medications' distinctive 'footprints' will also be covered.

Target audience: *Anaesthesiologists, intensivists and anyone interested in the field of neuromonitoring.*

Chair: Dana Baron Shahaf (Haifa, Israel)
Co-Chair: Özlem Korkmaz Dilmen (Istanbul, Turkey)

This workshop is kindly supported by Masimo and Medtronic Engineering the extraordinary

09:00 **Welcome and Introduction**
Facilitator: Dana Baron Shahaf (Haifa, Israel)
Facilitator: Özlem Korkmaz Dilmen (Istanbul, Turkey)

09:05 **TRANSCRANIAL DOPPLER**

Basic principles and application, assessment of cerebral perfusion and autoregulation, estimation of ICP, diagnosis of cerebral vasospasm and brain death.
Facilitator: Özlem Korkmaz Dilmen (Istanbul, Turkey)

09:20 **Q&A**

09:25 **INTRACRANIAL PRESSURE (ICP) AND OPTIC NERVE SHEATH DIAMETER (ONSD)**

Basic principles and applications of ONSD and ONSD-guided assessment of elevated ICP.
Facilitator: Chiara Robba (Genova, Italy)

09:40 **Q&A**

09:45 **CEREBRAL OXIMETRY**

Basic principles and applications of NIRS and NIRS-guided prediction of cerebral ischemia, assessment of regional oxygen supply and oxygen consumption balance and cerebral autoregulation.
Facilitator: Aeyal Raz (Haifa, Israel)

10:00 **Q&A**

10:05 **ELECTROENCEPHALOGRAPHY (EEG)**

Basic overview of EEG, pros and cons of different monitors, spectrogram analysis and different anaesthetic medications' distinctive 'footprints'.
Facilitator: Dana Baron Shahaf (Haifa, Israel)

10:20 **Q&A**

10:25 ***BREAK***

10:40 **HANDS-ON PRACTICE**

Workstation 1: Transcranial Doppler
Facilitator: Özlem Korkmaz Dilmen (Istanbul, Turkey)

Workstation 2: Optic Nerve Sheath Diameter
Facilitator: Chiara Robba (Genova, Italy)

Workstation 3: Cerebral oximetry
Facilitator: Aeyal Raz (Haifa, Israel)

Workstation 4: Electroencephalography
Facilitator: Dana Baron Shahaf (Haifa, Israel)
Facilitator: Basak Ceyda Meco (Ankara, Turkey)

12:00 **Feedback & Summary**