



PRINCIPLES AND PRACTICE OF
**INTRAOPERATIVE
NEUROMONITORING**

NOVEMBER 5 - 6, 2022

Presented by



Location

In-person only at

UPMC Presbyterian - BST S120

200 Lothrop Street, Pittsburgh PA, 15213

LEARNING OBJECTIVES

The course will highlight practice specifications, multimodality protocols, recent advances in the field, pre-/post-operative neurological evaluation and management, and telemedicine. Presentations will make reference to current literature, technical developments, methodologies and clinical efficacy. The faculty includes University of Pittsburgh Medical Center physicians and neurophysiologists with extensive clinical and academic expertise in IONM. The course is designed to expose the participants to material that will allow them to acquire a comprehensive understanding of IONM and how it relates to a wide variety of relevant topics such as:

- Advanced principles for neurophysiological monitoring, including instrumentation, neuromonitoring protocols, alarm criteria and clinical efficacy.
- Pre-, peri- and post-operative evaluation of neurological complications including stroke, cognitive deficits, seizure and spinal cord injury.
- Multimodality monitoring techniques for a broad array of procedures including spine and vascular.
- Cranial nerve monitoring during skull base procedures.
- Interpretation and communication with surgical team.
- Development of a Policy & Procedure manual; documentation and communication with the technologist; development of quality assurance metrics; and staff training.
- Problem based learning with real-time data analysis and formulation of differential diagnoses.

TARGET AUDIENCE

- Neurologists
- Surgical Neurophysiologists
- PM&R physicians
- Neurological Surgeons
- Anesthesiologists
- Orthopedic Surgeons
- Board Certified Neurophysiologists
- Vascular Surgeons
- Senior Neurophysiology Technologists
- ENT Surgeons
- Cardiac surgeons

Faculty:

Katherine Anetakis, MD – University of Pittsburgh Department of Neurological Surgery

Jeffrey Balzer, PhD – University of Pittsburgh Department of Neurological Surgery

Mollie Barnes, CNIM – Procirca Center for Clinical Neurophysiology

Marianella Campos, MD – ARKANA Forum Medical Education Center, Germany

Marco Capogrosso, PhD - University of Pittsburgh Department of Neurological Surgery

Jonathan Drumheller, CNIM - Procirca Center for Clinical Neurophysiology

Paul Gardner, MD - University of Pittsburgh Department of Neurological Surgery

Brian Gierl, MD - University of Pittsburgh Department of Anesthesia

Shane Gordon, CNIM - Procirca Center for Clinical Neurophysiology

Anthony Gossett, CNIM – Procirca Center for Clinical Neurophysiology

Bradley Gross, MD - University of Pittsburgh Department of Neurological Surgery

Krystal Kenney, MPH, CNIM – Clinical Quality and Education Director for Real Time Neuromonitoring Associates

Joseph Laneve, DPT, CNIM – Supervisor of IONM at West Virginia University Medicine

Rachel Mihal, CNIM - Procirca Center for Clinical Neurophysiology

Vizmary Montes-Peña, PhD – Neurophysiologist with National Guard Health Affairs, Saudi Arabia

Andrew Moyer, CNIM – Director, Neurological Services for Procirca Center for Clinical Neurophysiology

Dreux Priore, MS, R.EEG T - Procirca Center for Clinical Neurophysiology

Varun Shandal, MD - University of Pittsburgh Department of Neurological Surgery

Ibrahim Sultan, MD – University of Pittsburgh Department of Cardiovascular Surgery

R. Joshua Sunderlin, MS, CNIM – Director of Education for Procirca Center for Clinical Neurophysiology

Partha Thirumala, MD - University of Pittsburgh Department of Neurological Surgery

Xiaoran Zhang, MD – University of Pittsburgh Department of Neurological Surgery

DAY 1: Saturday Nov 5

630A – 700A	Continental Breakfast
700A – 715A	Welcome Address – Partha Thirumala, MD; R. Joshua Sunderlin, MS, CNIM
715A – 745A	Lecture: Modalities, Alarm Criteria, Significant Changes – (Partha Thirumala, MD)
745A – 815A	Lecture: IONM Checklists (Spine, Cardiac) – (R. Joshua Sunderlin, MS, CNIM)
815A – 915A	Interactive Case Studies: SSEP Fundamentals and cases (Krystal Kenney, MPH, CNIM)
915A – 930A	Break 15 min
930A – 1030A	Demonstrative Session: Creating tests on Specific Equipment for Specific Procedures #1 (Joseph Laneve, DPT, CNIM)
1030A – 1100A	Lecture: Skull Base Surgery & IOM (Paul Gardner, MD)
1100A – 1145A	Interactive Case Studies: IONM for stroke detection in Cardiovascular cases (Ibrahim Sultan, MD and Katherine Anetakis, MD)
1145A – 1230P	Lunch
1230P – 130P	Lecture: TcMEPs in Pediatric Population (Vizmary Montes-Peña, PhD)
130P – 230P	Workshop: Cadaver lab – placing SSEP/TcMEP/EEG/BAER electrodes (Dreux Priore, MS, R.EEG T and Anthony Gossett, CNIM)
230P – 330P	Lecture: IONM for Microvascular Decompression of Cranial Nerve VII for Hemifacial Spasm (R. Joshua Sunderlin, MS, CNIM)
330P – 345P	Break 15min
345P – 415P	Interactive Case Studies: TcMEP cases (Varun Shandal, MD, and Jonathan Drumheller, CNIM)
415P – 515P	Interactive Case Studies: Skull base procedures (Partha Thirumala, MD, and R. Joshua Sunderlin, MS, CNIM)
515P	Adjournment Day 1
530P – 730P	Meet and Greet at Hotel

DAY 2: Sunday Nov 6

630A – 700A	Continental Breakfast
700A – 715A	Welcome Address Day 2 – Partha Thirumala, MD; R. Joshua Sunderlin, MS, CNIM
715A – 815A	Lecture: Anesthesia, Physiology, and IONM (Brian Gierl, MD)
815A – 915A	Interactive Case Studies: IONM troubleshooting – Can you identify the technical problem? (Andrew Moyer, CNIM)
915A – 930A	Break 15min
930A – 1030A	Demonstrative Session: Creating tests on Specific Equipment for Specific Procedures #3 (Marianella Campos, MD)
1030A – 1130A	Interactive Case Studies: Neuroendovascular Procedures (Bradley Gross, MD and Jeffrey Balzer, PhD)
1130A – 1230P	Lunch
1230P – 130P	Lecture: Translational research in motor paralysis, the importance of non-human primate models for clinical applications (Marco Capogrosso, PhD)
130P – 230P	Workshop: Cadaver lab – Cranial Nerve EMG Placement (Rachel Mihal, CNIM; Partha Thirumala, MD)
230P – 330P	Demonstrative Session: Creating tests on Specific Equipment for Specific Procedures #4 (Mollie Barnes, CNIM; Andrew Moyer, CNIM)
330P – 345P	Break 15min
345P – 445P	Interactive Case Studies: Craniotomy with mapping (Xiaoran Zhang, MD, and Shane Gordon, CNIM)
445P – 515P	Lecture: Medicolegal must knows for IONM providers – Jeffrey Balzer, PhD
5:15P	Adjournment Day 2 (Course adjournment)

Faculty Disclosure

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All of the relevant financial relationships for the individuals listed below have been mitigated:

Marianella Campos, MD: Consultant – Inomed GmbH (Germany)

Marco Capogrosso, PhD: Stockholder - Reach Neuro Inc.

Paul Gardner, MD: Consultant – SPIWay, LLC (ownership interest); Royalties – Peter Lazic US, Inc.

Bradley Gross, MD: Consultant – Medtronic, Microvention

Ibrahim Sultan, MD: Grant Research Support – Artivion, Abbott, Boston Scientific, Edwards, Medtronic

No other planners, members of the planning committee, speakers, presenters, authors, content reviewers and/or anyone else in a position to control the content of this education activity have relevant financial relationships to disclose.

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Physician (CME)

The University of Pittsburgh designates this live activity for a maximum of 17.5 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Other Healthcare Professionals:

Other health care professionals will receive a certificate of attendance confirming the number of contact hours commensurate with the extent of participation in this activity.

ASET CEUs

ASET – The Neurodiagnostic Society has granted 17 Continuing Education Units [ASET-CEUs] for this program. Such crediting, however, should not be construed by program participants as an endorsement of any type of instruments or supplies mentioned or involved in these presentations.

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