





# Global Neuro Advanced Course—Neurotrauma



April 11–12<sup>th</sup>, 2025, Jai Prakash Narayan Apex Trauma Center, All India Institution of Medical Sciences, New Delhi, India

# Global Neuro welcomes you

On January 1, 2018, AONeuro became Global Neuro for the purpose of broadening our geographical reach and for the opportunity to work with multiple partners. Our new foundation is incorporated in Switzerland and is ready to serve you to improve the educational and practical experiences in patient care and outcomes.

We offer educational events across the world, with rigorously prepared and evaluated curricula, in multiple cultural and educational formats. Global Neuro's educational offerings include lecture presentations, interactive case discussions, small group discussions, practical exercises, simulation exercises, and online education. Global Neuro strives to increasingly collaborate with regional, national, and international societies and organizations to deliver symposia and courses at congresses and annual meetings. These partnerships enable us to provide the best formats possible.

While our initial educational efforts began with neurosurgeons, we are increasingly collaborating with neurologists, emergency physicians, trauma surgeons, neurointensivists, neuro-anesthesiologists, neuroradiologists, and other neuro professionals to provide comprehensive education and program development opportunities. Emergency care, specific neurological care, and recovery are too complex to depend upon a single discipline. As such, collaboration is required to be able to make the greatest impact on our patients' progress and outcomes.

We hope this program meets your expectations, as it is based on continuous development, study, evaluation, and discussion. Please let us know if you have ideas or suggestions for how we can enhance your learning and educational experience.

Join our network of professionals, as we work together to improve the results in neuro care and rehabilitation for all our patients.

Warm regards,



Andres M. Rubiano President Global Neuro Foundation

#### Course description

This course covers the current best strategies and considerations for managing neurotrauma patients with a special emphasis on advanced surgical treatment and neuromonitoring. The course is based on competencies defined in Global Neuro's curriculum. The content is delivered using multiple methods. Comprehensive lectures concentrate on the understanding of core material. Interactive case presentations further deepen this knowledge and enrich the discussion in trauma management. Practical sessions teach the application of Global Neuro principles to the management of common injuries. Case-based discussions link the lecture material and practical skills with the clinical problems encountered in clinical practice.

#### Target participants

The Global Neuro Advanced Course has been developed for trainees, neurosurgeons, neurointensivists and neuroanesthetists who are interested in the management of cranial and spinal neurotrauma, neurocritical care and who have a strong interest in complex patient care, clinical research, and an interdisciplinary approach.

#### Goal of the course

The Global Neuro Advanced Neurotrauma Course covers the management of complex cranial neurotrauma using advanced monitoring, devices, and techniques. There will also be a focus on current research and the management of challenging clinical scenarios and complications. Special feature in this course will be the ICM+ workshop. ICM+ is a pioneering clinical research tool solution that offers real time analysis from multiple bedside monitoring sources. Various hands-on workshops by experts in neurotrauma care will be held in this 2-day intense training course.

#### Learning objectives

By completing this advanced course, participants will be better able to:

- Apply current classification systems, guidelines and recommendations in neurotrauma
- Name new trends and future topics in neurotrauma care
- Manage complex neurotrauma, including penetrating injuries, vascular injuries, skull base fractures and spinal cord injuries with an interdisciplinary approach
- Conduct and interpret advanced imaging and neuromonitoring
- Plan and perform the following operative techniques: multifunctional probes, complex cranial reconstruction, and dural repair
- Manage complex complications such as metabolic disturbances, CSF leaks, coagulopathy, and cranial neuropathies
- Discuss and conduct state-of-the-art clinical research

# Faculty

## **Course Chair**



SS Kale All India Institute of Medical Sciences New Delhi, India

## **Course Co-Chair**





Ashish Suri

All India Institute

New Delhi, India

of Medical Sciences

P Sarat Chandra All India Institute of Medical Sciences New Delhi, India

## **International Faculty**



Corrado laccarino University of Modena and Reggio Emilia Modena, Italy



Peter Smielewski University of Cambridge Cambridge, United Kingdom

## **International Guest Faculty**



Takashi Araki Saitama Prefectural Children's Medical Center Saitama, Japan



Sui Sum Kung **Kaohsiung Medical** University Hospital Kaohsiung, Taiwan



Anna Teresa Mazzeo University of Messina Messina, Italy





Royal Hospital for Children & Young Edinburgh, United Kingdom



Thomas Nakagawa University of Florida Gainesville, USA

## **Course Director**



Deepak Gupta JPN Apex Trauma Centre All India Institute of Medical Sciences New Delhi, India

### Course Co-Chair



Sachin Borkar All India Institute of Medical Sciences New Delhi, India



Andres Rubiano University El Bosque Bogotá, Colombia



Shoji Yokobori Nippon Medical School Tokyo, Japan



Tsz-Yan Lo



Samuel Kaba Greater Accra **Regional Hospital** Accra, Ghana

# Faculty (Continue)

National Faculty		
Ajay <b>Bakshi</b>	Neuroance AI Technologies	Bengaluru, India
Ashish <b>Bindra</b>	Jai Prakash Narayan Apex Trauma Center	New Delhi, India
Keshav <b>Goyal</b>	Jai Prakash Narayan Apex Trauma Center	New Delhi, India
Mathew <b>Joseph</b>	Christian Medical College Vellore	Vellore, India
Sachin <b>Kandhari</b>	IBS Hospital	Delhi, India
Shweta <b>Kedia</b>	All India Institute of Medical Sciences	New Delhi, India
Surya Gour <b>Krishnan</b>	Jai Prakash Narayan Apex Trauma Center	New Delhi, India
R Raghavendran	Madaras Medical College	Chennai, India
Dhaval <b>Shukla</b>	NIMHANS	Bengaluru, India
Maria D <b>Souza</b> .	Institute of Nuclear Medicine and Allied sciences	New Delhi, India

# Day 1, Friday, April 11, 2025

TiME	SUBJECT	SPEAKER
07:30-08:00	Registration	
08:00–08:10	Welcome Remarks Course Introduction	SS Kale Deepak Gupta
08:10-08:15	Global Neuro Remarks	Andres M. Rubiano
Module 1	Guidelines and Protocols in Neurotrauma	Moderator: Deepak Gupta
08:15-08:50	State-of-the-art update on Traumatic Brain Injury (20 min) and Discussion (15 mins)	Andres M. Rubiano Moderator: Mathew Joseph
08:50–09:05	CREVICE Protocols: How to deal with TBI when ICP monitoring is not employed	Dhaval Shukla
09:05–09:20	SIBICC I, II Protocols: How to Deal with TBI based on Invasive ICP Monitoring	Mathew Joseph
09:20–09:35	Current Guidelines in Pediatric TBI	Takashi Araki
09:35–09:50	The Bootstrap Protocol: A New Perspective for Managing TBI in Different Contexts	Andres M Rubiano
09:50-10:05	Targeted Temperature Management in TBI	Shoji Yokobori
10:05-10:20	<b>Case–based approach</b> : My best and worst case in Pediatric TBI – Lessons learnt	Takashi Araki
10:20–10:35	<b>Case–Based approach</b> : My best and worst case in Elderly TBI – Lessons learnt	Shoji Yokobori
10:35:10:50	<b>Case–Based approach</b> : Challenging Cases in Brain and Cranial Trauma– Monitoring and ICU care in severe TBI case– Lessons learnt	R Raghvendran
10:50-11:00	COFFEE BREAK and Networking	
Module 2	Fundamental Aspects of Neurocritical Care for TBI	Moderator: Dhaval Shukla
11:00–11:15	Pathophysiology for neurocritical care	Sui Sum Kung
11:15–11:30	Drug Treatment in Neurocritical care for Pediatric TBI	Thomas Nakagawa
11:30 - 11:45	Holistic Care of TBI in Elderly Patients in the Neurotrauma ICU	Shoji Yokobari
11:45–12:00	Ventilatory Management in Neurotrauma	Anna Teresa Mazzeo
12:00–12:15	Advanced Neuromonitoring in Neuro ICU and data capture	Peter Smielewski

12:15-12:30	Intergration of Invasive and Non– invasive Neuromonitoring in TBI care	Andres M. Rubiano
12:30-12:45	Goal Directed Neurocritical care for TBI in India	Mathew Joseph
12:45-13:00	Q & A session	
13:00-14:00	LUNCHEON SYMPOSIUM	
Module 3	Modern Trends and Concepts in SCI Diagnosis and Management	Moderator: Corrado laccarino
14:00-14:30	State–of–the–art update on Traumatic Spinal Cord Injuries (20 mins) and discussion (10 mins)	Andres M. Rubiano Moderator: SS Kale/ Sachin Borkar
14:30-14:45	Advanced Spinal Monitoring in SCI	Sachin Borkar
14:45–15:00	AO, WFNS Guidelines for Spinal Cord Injury: Diagnosis and Management	Samuel Kaba Akoriyea
15:00–15:15	Implantation technologies in Spinal paraplegics & Rehabilitation advances	Sachin Kandhari
15:15-15:30	<b>Case-based approach</b> : Geriatric Spinal Cord Injuries – Special considerations	Corrado laccarino
15:30–15:45	<b>Case–based approach:</b> Acute Spinal Cord Injury with Thoracic and Abdominal Injuries	Kamran Farooque
15:45–16:00	<b>Case-based approach:</b> Acute Cervical SCI with Posterior Compression and Complete Deficit	Sachin Borkar
16:00-16: 15	<b>Case-based approach:</b> Pediatric Cervical Spinal injuries in infants and very young children – Special considerations	Deepak Gupta
16:15-16:35	Artificial intelligence and New technologies in neuro ICU patients	Elena Giovanna Bignami
16:35-16:55	Artificial Intelligence in Neurosciences	Ajay Bakshi
16:55 - 17:00	COFFEE BREAK	
Module 4	ICM + TBI Monitoring and Spine Stabilisation Workshop	Moderator: Mathew Joseph /Vivek Tandon
17:00-19:00	4A: Neurocritical care applied Monitoring Workshop 1 (ICM+)	Peter Smielewski Moderator: Deepak Gupta / Tsz-Yan Lo / Keshav Goyal

17:00-19:00	<b>4B: Hands on Sessions Spine</b> Spinal Stabilisation – Occiptal cervical Spinal Stabilisation – Dorso Lumbar	Corrado laccarino Moderators: Sachin Borkar / Surya Gour Krishnan
19:00–19:15	Closing Remarks Day 1	SS Kale Deepak Gupta
20:00-23:00	Dinner	

# Day 2. Saturday, 12 April, 2025

TiME	SUBJECT	SPEAKER
7:45-08:00	Introduction to Day 2	Deepak Gupta
Module 5	Hot Topics in Neurotrauma Care & Brain Death	Moderator: Anna Teresa Mazzeo
08:00-08:15	Algorithmical Care in Neuro-intensive Care unit	Keshav Goyal
08:15–08:30	Integration of Invasive and Non–Invasive Neuromonitoring in TBI Care	Andres M Rubiano
08:30-08:45	Consensus Guidelines in Cranioplasty	Corrado laccarino
08:45-09:00	Aggressive Donor Management Protocols	Anna Teresa Mazzeo
09:00-09:15	Advanced/Research Neuroimaging in Neurotrauma	Maria D Souza
09:15-09:30	Current Knowledge and Guidelines in Post traumatic Hydrocephalus	Corrado laccarino
09:30-09:45	Death by Neurological Criteria	Mathew Joseph
09:45-10:00	Secondary Insults Monitoring before and after brain death in Adults	Anna Teresa Mazzeo
Module 6	Hands-On Sessions	Andres M Rubiano/Sui Sum Kung
10:00–12:00	Station (1A, 1B, 1C) Traumatic Brain Injury	Moderators: Shweta Kedia Vivek Tandon
	Neurotrauma Radiology (20 min) Decompressive Craniectomy & Cranial Reconstruction (20 min) EVD and ICP monitoring (20 min)	Dhaval Shukla Corrado laccarino Mathew Joseph Moderator: Shweta Kedia
	Non–Invasive Neuromonitoring (60 min) NINM : Near Infrared Spectroscopy (NIRS) ( 10 min) NINM : Pupillometry ( 10 min ) NINM: Brain4Care ( 20 min) NINM: EEG ( 20 min)	Andres Rubiano Anna Teresa Mazzeo Sui Sum Kung Sergio Brasil
	Neurocritical care applied Monitoring Workshop 2 (ICM+) (120 min)	Peter Smielewski Moderators: Deepak Gupta/ Tsz-Yan Lo/ Keshav Goyal
12:00–13:00	LUNCHEON Symposium	

Module 7	Shaping the future in Paediatric Neurotrauma care	
13:00–13:15	Challenges with Abusive Head Trauma	Takashi Araki
13:15 -13:30	Nutrition in TBI care in Children	Ashish Bindra
13:30 - 13:45	Barbiturate Coma for Children with severe TBI	Thomas Nakagawa
13:45-14:00	AI–IMPACT4KidsTBI: Working together to revolutionise childhood traumatic brain injury care	Tsz-Yan Lo
14:00-14:15	Advances in Critical Care Support of Children	Thomas Nakagawa
14:15-14:30	Q & A Session for Module 7	
14:30-15:00	Closing Remarks Day 2 and Final Certification	SS Kale Deepak Gupta

# Course information

#### Event venue

New Seminal Hall, First Floor, Jai Prakash Narayan Apex Trauma Center, All India Institution of Medical Sciences, Delhi 110029, India

#### Event organization

Global Neuro Foundation Clavadelerstrasse 1 7270 Davos Switzerland Website: www.globalneuro.org

#### Event organizer

Jenny Cheng Email: jenny.cheng@globalneuro.org

#### Global Neuro funding sources

Unrestricted educational grants from different sources are collected and pooled together centrally or for specific events by the Global Neuro Foundation. All events are planned and scheduled by local and regional Global Neurosurgeon groups based on local needs assessment. We rely on commercial partners for in-kind support to run simulations/skills training if educationally needed

# General information

#### Event fee

#### Global Neuro Advanced Course-Neurotrauma Course fee:

USD 200

- Discount for International resident / local resident / Fellows (50%)
- Discount for Local delegate (25%)

The course fee includes course material, coffee breaks, lunch, and a course certificate.

Registration Please click here for registration

#### Course certificate

The course certificates can only be provided if the participant attends the entire event (100%) and will be available at the end of the event.

#### **Evaluation guidelines**

All Global Neuro events apply the same evaluation process, either online (preand post-event evaluation) and/or onsite by paper and pencil questionnaires. This helps Global Neuro to ensure that we continue to meet your training needs.

Dress code Casual

Language English

#### No insurance

The event organization does not take out insurance to cover any individual against accidents, theft, or other risks.

#### Security

Security checks may be conducted at the entrance of the building. Wearing a name tag is compulsory during lectures, practical exercises, and group discussions.

#### Mobile phone use

The use of mobile phones is not allowed in the lecture halls and other rooms during educational activities. Please be considerate of others by turning off your mobile phone.

#### Intellectual property

Event materials, presentations, and case studies are the intellectual property of the event faculty. All rights are reserved. Check hazards and legal restrictions on www.globalneuro.org/legal

Recording, photographing, or copying of lectures, practical exercises, case discussions, or any course materials is strictly forbidden. Participants violating intellectual property will be dismissed.

The Global Neuro Foundation reserves the right to film, photograph, and audio record during their events. Participants must understand that in this context, they may appear in these recorded materials. The Global Neuro Foundation assumes participants agree that these recorded materials may be used for Global Neuro marketing and other purposes and made available to the public.

## Global Neuro Foundation—Principles of Educational Events

#### 1) Academic independence

Development of all curricula, design of scientific event programs, and selection of faculty are the sole responsibilities of volunteer surgeons from the Global Neuro network. All education is planned based on needs assessment data, designed and evaluated using concepts and evidence from the most current medical education research, and involves the expertise of the Global Neuro Education Institute (www.globalneuro.org).

Industry participation is not allowed during the entire curriculum development and planning process to ensure academic independence and to keep content free from bias.

#### 2) Compliance to accreditation and industry codes

All planning, organization, and execution of educational activities follow existing codes for accreditation of high-quality education:

- Accreditation Criteria of the Accreditation Council for Continuing Medical Education, USA (www.accme.org)
- ACCME Standards for Commercial Support: Standards to Ensure Independence in CME Activities (www.accme.org)
- Criteria for Accreditation of Live Educational Events of the European Accreditation Council for Continuing Medical Education (www.uems.eu)
- Events that receive direct or indirect unrestricted educational grants or in-kind support from industry also follow the ethical codes of the medical industry, such as:
- Eucomed Guidelines on Interactions with Healthcare Professionals (www.medtecheurope.org)
- AdvaMed Code of Ethics on Interactions with Health Care Professionals (www.advamed.org)
- Mecomed Guidelines on Interactions with Healthcare Professionals (www.mecomed.org)

#### 3) Branding and advertising

No industry logos or advertising (with the exception of the Global Neuro Foundation) are permitted in the area where educational activities take place.

Sponsors providing financial or in-kind support are allowed to have a promotional booth or run activities outside the educational area with approval from the event chairperson.

#### 4) Personnel

Industry staff are not allowed to interfere with the educational content or engage in educational activities during the event.

# Sponsors

A special thanks to our partners Bioscan Research for providing educational support grants and in-kind support for this event.

