

Event program

# AONEuro Course—Neurotrauma

May 12–13, 2017 Porto, Portugal





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## Welcome

On behalf of the AO Foundation and your AONEuro faculty, it is my pleasure to welcome you to this neurotrauma educational event!

Through its major focus on education, the AO Foundation brings educational excellence to over 46,000 surgeons at 750 AO events worldwide each year.

As part of the AO Foundation, AONEuro serves as a worldwide, multispecialty community of cranial neurosurgeons, neurologists, neurointensivists, and neurology-related professionals who are committed to improving neuro patient outcomes.

AONEuro's educational offering focuses on Traumatic Brain Injury, Skull Base Surgery, and Cerebrovascular Surgery. To enhance the effectiveness of our programs, we cooperate with regional, national, and international neurosurgical organizations, as well as with our AOSpine and AOCMF colleagues. This way, we can bring you the latest developments in the treatment of brain, facial, spinal cord trauma, and congenital anomalies.

Our case-based learning approach, together with practical skill training in the laboratory, enables you to develop your skills using the newest equipment, along with the latest scientific knowledge.

After this course concludes, please visit our website, [www.aoneuro.org](http://www.aoneuro.org), where you can sign-up for our newsletter, find additional educational materials, and learn about upcoming educational activities.

We thank you for your participation and wish you a successful AONEuro course experience.

Yours sincerely,



**Paul Manson**

AO Board of Directors appointed  
Coordinator for AONEuro

## Goal of the course

The AONeuro Course—Neurotrauma covers the theoretical basis and practical principles for managing neurotrauma, addressing complications, and performing state-of-the-art reconstructive surgery.

## Target participants

The course has been developed for residents and surgeons that manage neurotrauma and reconstruction and who have a strong interest in these fields. It focuses on interdisciplinary care and is appropriate for neurosurgeons, trauma surgeons, and intensive care doctors

## Learning objectives

Upon completion of this course, participants should be able to:

- Apply current classification systems and guidelines in neurotrauma
- Manage neurotrauma and skull base fractures in adult, pediatric, and polytrauma patients
- Conduct advanced neuromonitoring
- Plan and perform appropriate operative treatment (eg, decompressive craniotomy, complex cranial reconstruction)
- Manage cerebrospinal fluid leaks and other complications and perform dural repairs.

## Course description

This course covers the current best strategies and considerations for managing neurotrauma patients. It features an international faculty of experts and is based on the competencies defined in AONeuro's new neurotrauma curriculum.

The course content is delivered using multiple educational methods. Comprehensive lectures concentrate on the understanding of core material. Interactive case presentations further deepen this knowledge and facilitate the discussion in trauma management. Newly developed practical exercises enable participants to apply AO principles in the management of common injuries. Case-based discussions link the lecture material and practical skills with the clinical problems commonly encountered in everyday practice.

## Chairpersons



### **Óscar L. Alves**

Serviço de Neurocirurgia  
Centro Hospitalar de Gaia  
Hospital Lusíadas Porto  
Porto, Portugal



### **Ross Bullock**

University of Miami Miller School of Medicine  
Miami, USA

## International Faculty

Jorge Paranhos

Santa Casa da Misericórdia

São João del Rey, Brasil

## Regional faculty

Alfonso Lagares

Maria Antonia Poca

Michael Bierschneider

Hospital "12 de Octubre"

Vall d'Hebron University Hospital

Berufsgenossenschaftliche Unfallklinik

Madrid, Spain

Barcelona, Spain

Murnau, Germany

## National Faculty

Celeste Dias

Pedro Amorim

Centro Hospitalar de São João

Centro Hospitalar do Porto

Porto, Portugal

Porto, Portugal

## Special Guests

Alvaro Lima

Hugo Romão

Rui Reinas

Djamel Kitumba

Daniela Seixas

Lurdes Lisboa

Renato Nunes

Hospital da Luz

Centro Hospitalar de Vila Nova de Gaia

Centro Hospitalar de Vila Nova de Gaia

Centro Hospitalar de Vila Nova de Gaia

Centro Hospitalar de Vila Nova de Gaia

Centro Hospitalar de São João

Centro de Reabilitação do Norte

Lisbon, Portugal

Vila Nova de Gaia, Portugal

Vila Nova de Gaia, Portugal

Vila Nova de Gaia, Portugal

Vila Nova de Gaia, Portugal

Porto, Portugal

Vila Nova de Gaia, Portugal

## Friday, May 12, 2017

TIME	AGENDA ITEM	WHO
08:00–08:30	Registration	
08:30–08:35	Welcome and introduction to the course	OL Alves
08:35–08:45	The AO Foundation and the AONeuro Initiative	R Bullock
08:45–08:50	<b>Module 1: Basics of neurotrauma</b> Introduction by the moderator	Moderator: MA Poca
08:50–09:00	Epidemiology and socioeconomic costs of Traumatic brain injury (TBI)—how big is the problem?	P Amorim
09:00–09:15	Brain injury pathophysiology: compliance, auto-regulation, ischemia, mitochondrial failure and excitotoxicity	R Bullock
09:15–09:25	Outcomes in TBI	C Dias
09:25–09:35	Evaluation scales in TBI for a common language: Glasgow Coma Scale and Marshall classification	R Reinas
09:35–09:50	Severe TBI in multiple trauma: evaluation, damage control, and early resuscitation	M Bierschneider
09:50–10:10	<b>Panel session:</b> <b>Polytrauma with severe TBI</b> Interactive decision making and discussion in polytrauma patient	Moderator: OL Alves J Paranhos M Bierschneider
10:10–10:30	COFFEE BREAK	
10:30–10:35	<b>Module 2: Diagnostics and monitoring</b> Introduction by the moderator	Moderator: C Dias
10:35–10:50	Intensive care unit (ICU) multimodality monitoring of the TBI patient—present and future	MA Poca
10:50–11:00	Evaluation of brain swelling, brain perfusion and hematoma volume	D Seixas
11:00–11:15	<b>Debate:</b> Intracranial pressure (ICP) monitoring—pros and cons	R Bullock OL Alves
11:15–11:20	<b>Module 3: Medical treatment</b> Introduction by the moderator	Moderator: A Lagares
11:20–11:35	Evidence-based guidelines in TBI—an update	R Bullock
11:35–11:45	Concepts and treatment of traumatic brain edema	MA Poca
11:45–11:55	Osmotherapy in TBI—myths and facts	J Paranhos

TIME	AGENDA ITEM	WHO
11:55–12:05	Hypothermia and TBI—local, systemic, or none?	C Dias
12:05–12:45	<b>Panel session: Avoidable mortality</b> My worst TBI cases	Moderator: R Bullock J Paranhos M Bierschneider
12:45–13:45	LUNCH	
13:45–15:15	<b>Small group discussion: Typical neurotrauma scenarios</b> <ul style="list-style-type: none"> <li>• Mild head injury</li> <li>• Chronic subdural hematoma</li> <li>• Awake patient with mass effect lesion</li> <li>• Diffuse injury type III (DI III) with slightly elevated intracranial pressure</li> </ul>	A Lagares M Bierschneider MA Poca J Paranhos
15:15–15:20	<b>Module 4: Surgical treatment</b> Introduction by the moderator	Moderator: R Bullock
15:20–15:30	Skull base fractures and cerebrospinal fluid (CSF) leak management	A Lagares
15:30–15:40	Update in the pathophysiology and treatment of traumatic brain contusions	MA Poca
15:40–15:50	Treatment dilemmas of chronic subdural hematomas	M Bierschneider
15:50–16:00	The role of decompressive craniectomy in TBI	OL Alves
16:00–16:10	Cranial defect reconstruction after decompress craniectomy: timing and complications	H Romão
16:10–16:30	COFFEE BREAK	
16:30–16:35	<b>Module 5: Special topics</b> Introduction by the moderator	Moderator: P Amorim
16:35–16:45	Penetrating brain injuries and outcomes	R Bullock
16:45–17:00	Pediatric traumatic brain injury: how different it is?	L Lisboa
17:00–17:10	Managing TBI in low income countries—what are the priorities?	D Kitumba
17:10–17:20	Chronic traumatic encephalopathy—the role of concussion	R Bullock
17:20–17:35	Organize rehabilitation and follow-up of TBI patients	R Nunes
17:35–18:00	Evaluation and wrap-up of day 1	R Bullock OL Alves

## Saturday, May 13, 2017

TIME	AGENDA ITEM	WHO
09:00–09:05	<b>Module 6: Complications</b> Introduction by the moderator	Moderator: J Paranhos
09:05–09:20	TBI and coagulation disorders: before and after	A Lagares
09:20–09:30	Posttraumatic hydrocephalus: detection and treatment	MA Poca
09:30–09:40	Vascular injuries in neurotrauma	A Lagares
09:40–09:50	Posttraumatic epilepsy: incidence and management	P Amorim
09:50–09:55	<b>Module 7: Spinal cord injury (SCI)</b> Introduction by the moderator	Moderator: R Bullock
09:55–10:05	SCI evidence-based management: blood pressure, methylprednisolone	A Lima
10:05–10:25	<b>Debate:</b> SCI timing of surgery: early versus delayed	A Lima OL Alves
10:25–10:45	COFFEE BREAK	
10:45–12:45	<b>Hands-on workshop in neurotrauma</b> <ul style="list-style-type: none"> <li>• Decompressive craniectomy</li> <li>• Cranioplasty</li> <li>• ICP monitoring</li> </ul>	All faculty
12:45–13:00	Evaluation and closing of the course	OL Alves R Bullock



## Event organization

### **AONEuro**

Tamara Schönauer  
Clavadelstrasse 8  
7270 Davos, Switzerland  
Phone +41 81 414 25 33  
Fax +41 81 414 22 80  
Email [tamara.schoenauer@aoneuro.org](mailto:tamara.schoenauer@aoneuro.org)  
[www.aoneuro.org](http://www.aoneuro.org)

### **AO funding sources**

Unrestricted educational grants from different sources are collected and pooled together centrally by the AO Foundation.

All events are planned and scheduled by local and regional AO surgeon groups based on local needs assessment. We rely on industrial/commercial partners for in-kind support to run simulations/skills training if educationally needed.

## Event information and logistics

### **AO Courses Portugal**

Lurdes Duarte  
Phone +351 913 464 066  
Email [lurdes.duarte@ao-courses.com](mailto:lurdes.duarte@ao-courses.com)

### **Course organization compliance**

In certain countries where AO has no office but offers educational events, the AO cooperates with third party companies to conduct local organization and logistics, as well as to communicate with participants in the local language. In these cases the AO has put rules and guidelines in place (Letter of Secondment, AO Foundation—Principles of AO Educational Events) to ensure that this cooperation has no impact on the curricula, scientific program, or faculty selection.

## Event venue

### **Holiday Inn Porto Gaia**

Rua Diogo Macedo, 220

4400-107 Gaia, Portugal

Phone: +351 223 747 500

Fax +351 223 747 576

Email: [info@hiportogaia.com](mailto:info@hiportogaia.com)

Website: <http://www.hiportogaia.com/>



## General information

### Course fee

AONEuro Course—Neurotrauma: € 720.00  
Included in course fee are conference bag with documentation, coffee breaks, lunches, course dinner, and course certificate.

### Registration

[http://aoneuro\\_portugal\\_2017.aocmf.org](http://aoneuro_portugal_2017.aocmf.org)

### Evaluation guidelines

All AONEuro courses apply the same evaluation process, either ARS (audience response system) or paper and pencil questionnaires. This helps AONEuro to ensure that we continue to meet your training needs.

### Intellectual property

Course materials, presentations, and case studies are the intellectual property of the course faculty. All rights are reserved. Check hazards and legal restrictions on [www.aofoundation.org/legal](http://www.aofoundation.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 AO 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 AO Foundation assumes participants agree that these recorded materials may be used for AO marketing and other purposes, and made available to the public.

### Security

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

### No insurance

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

### Mobile phone use

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

### Dress code

Casual



# Principles of AO 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 AO 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 involving the expertise of the AO Education Institute ([www.aofoundation.org](http://www.aofoundation.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](http://www.accme.org))
- ACCME Standards for Commercial Support: Standards to Ensure Independence in CME Activities ([www.accme.org](http://www.accme.org))
- Criteria for Accreditation of Live Educational Events of the European Accreditation Council for Continuing Medical Education ([www.uems.eu](http://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](http://www.medtecheurope.org))
- AdvaMed Code of Ethics on Interactions with Healthcare Professionals ([advamed.org](http://advamed.org))
- Mecomed Guidelines on Interactions with Healthcare Professionals ([www.mecomed.org](http://www.mecomed.org))

## 3) Branding and advertising

No industry logos or advertising (with the exception of the AO Foundation and AO Clinical Division) 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) Use of technologies and products in simulations

If case simulations are chosen as an educational method to educate skills, we only use technology approved by the AOTK System (AOTK)—a large independent group of volunteer surgeons developing and peer-reviewing new technology (more information about AOTK, its development and approval process can be found on the AO Foundation website: [www.aofoundation.org](http://www.aofoundation.org)).

## 5) Personnel

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

# Upcoming AONeuro courses

<b>AP</b>	AONeuro Symposium—Neurotrauma	Mar 11–12	Tokyo, Japan
<b>NA</b>	AONeuro Course—Neurotrauma	Mar 25–26	San Francisco, USA
<b>EU</b>	AONeuro Course—Skull Base Micro Dissection	Apr 6–7	Arezzo, Italy
<b>AP</b>	AONeuro Seminar—Neurotrauma	Apr 20	Xian, China
<b>EU</b>	AONeuro Course—Neurotrauma	May 12–13	Porto, Portugal
<b>LA</b>	AONeuro Course—Neurotrauma	May 16–17	Toluca, Mexico
<b>EU</b>	AONeuro Course—Neurotrauma	May 17–18	Moscow, Russia
<b>LA</b>	AONeuro Course—Neurotrauma	Jun 2–3	Belo Horizonte, Brazil
<b>AP</b>	AONeuro Seminar—Traumatic Brain Injury	Jun 10	Suwon, Korea
<b>EU</b>	AONeuro Course—Neurotrauma	Jul 13–14	Murnau, Germany
<b>AP</b>	AONeuro Course—Neurotrauma-Traumatic Brain Injury and Autoregulation Monitoring	Oct 1–3	Hong Kong, Hong Kong
<b>AP</b>	AONeuro Course—Neurotrauma	Oct 26–27	New Delhi, India
<b>EU</b>	AONeuro Course—Skull Base	Oct 30–Nov 1	Vienna, Austria
<b>EU</b>	AONeuro Course—Neurotrauma	Nov 16–17	Madrid, Spain
<i>Global</i>	AONeuro Webinar—Practical Aspects of Neuromonitoring	Dec 12	Davos, Switzerland
<i>Global</i>	AONeuro Course—Neurotrauma	Dec 11–13	Davos, Switzerland

**AP** Asia Pacific **EU** Europe **ME** Middle East **LA** Latin America **NA** North America



Event Dates are subject to change,  
please check the AONeuro website  
for latest information  
<http://tiny.cc/e7189x>

# Notes

# Notes

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