



### Event program

## AOTrauma Course—Basic Principles of Fracture Management

May, 18–20, 2017 Chisinau, Moldova

Home to Trauma & Orthopedics

### Value statement

AOTrauma is committed to improve patient care outcomes through the highest quality education. We strive to combine the right knowledge and surgical skills that empower the orthopaedic and trauma surgeons to put theory into practice and to improve fracture management for the benefit of the patient.

### The AO principles of fracture management

Fracture reduction and fixation to restore anatomical relationships.

Early and safe mobilization and rehabilitation of the injured part and the patient as a whole.



Fracture fixation providing absolute or relative stability, as required by the "personality" of the fracture, the patient, and the injury.

Preservation of the blood supply to soft tissues and bone by gentle reduction techniques and careful handling. The first AO Course was held in Davos in 1960—these early courses pioneered psychomotor techniques by teaching practical skills of AO Techniques. Since those early days over 455,000 surgeons and 155,000 ORP staff from over 110 countries have attended AO Courses.

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### Welcome Dear AOTrauma course participant,

Welcome to the AOTrauma Course—Basic Principles of Fracture Management, which is planned and delivered to meet your needs using a competency-based curriculum approach and the AO's seven principles for high-quality education.

AO Trauma's innovative approach to education has been further strengthened as a result of the successful collaboration with the AO Education Institute in the application of state-of-the-art educational concepts in curriculum planning and all faculty development programs.

This course is one of our many educational activities for providing lifelong learning, from the Residents Education Program through to specialized Continuing Professional Development (CPD) for practicing surgeons and clinicians.

We believe that your active engagement in this course will result in improved care for your patients. Your current level of knowledge and skills will be challenged by the activities and throughout the entire event. We are confident that the combination of education principles and relevant content from our curriculum, as well as your interaction with colleagues and expert faculty will provide an effective learning experience that meets your needs.

This course is part of an overall competency-based educational program that includes many other activities and resources for self-directed learning. The educational activities in each program are developed by an international taskforce of clinical experts and educationalists and made available to you through the Education section of www.aotrauma.org.

We hope you enjoy the course and benefit from the networking opportunities it provides for you to share experiences with your colleagues.

Yours sincerely,



**Wa'el Taha** Chairperson AOTrauma Education Commission



John (Jack) Wilber Chairperson AOTrauma International Board



**Peter Brink** Chairperson AOTrauma EU Education Committee

If you enjoy the experience during your course and would like to stay in touch with the organization and its international network of surgeons, we invite you to become a member of AOTrauma. The benefits of membership, including options to get involved in new opportunities that advance trauma care are described at www.aotrauma.org.

### Goal of the course

The AOTrauma Course—Basic Principles of Fracture Management teaches fundamental principles and current concepts in the treatment of injuries, incorporating the latest techniques in operative fracture management. The AOTrauma Basic Principles course is the initial step along the path of lifelong learning in the area of operative fracture management. This course mainly focuses on the basic principles of fracture management.

### Target participants

The AOTrauma Course—Basic Principles of Fracture Management is targeted at physicians in surgical training but is also open to anyone else who is interested in furthering their knowledge and skills in operative fracture management.

### Learning objectives

At the end of this seminar participants will be able to:

- Discuss the concepts of stability, their influence on bone healing, and how to apply implants to achieve appropriate stability
- Plan a treatment based on assessment, imaging, classification, and decision making
- Apply reduction techniques in fracture management with attention to the importance of the soft tissues
- Treat diaphyseal and simple (peri)articular fractures using different application techniques
- Evaluate and recognize the special problems related to fractures in the immature skeleton, pelvic injuries, osteoporotic fractures, postoperative infection, delayed union and/or nonunion
- Plan the initial treatment of the polytraumatized patient

### Course description

Online precourse self-assessment prepares participants for the course and allows the faculty to tailor the course to the needs of the participants. Before attending the course, participants are expected to complete online modules on bone healing and classification. The course contains several evidence-based lectures, which cover the key information required. The AO Skills Lab engages participants in hands-on learning of basic principles and practical know-how needed for live surgery. With experiences such as proper tightening of a screw and feeling the difference between drilling with sharp and blunt drill bits, participants gain important surgical skills and learn about basic biomechanical concepts in a safe, instructive environment. In practical exercises participants will be trained in the application of fixation techniques. Discussing cases in small groups helps participants to understand decision-making and management skills.

After the course, an online postcourse self-assessment provides participants an opportunity to review the important topics from the course.



### Chairperson



**Andrei Ursache** Spitalul Clinic de Urgenta Floreasca Bucuresti, Romania

### Co-Chairperson



Alexandru Betisor State Medical and Pharmacy University, Chisinau, Moldova

### Regional faculty

Dinu	Gabriel	Spitalul Monza	Bucharest	Romania
Popescu	Mircea	County Hospital Timisoara	Timisoara	Romania
Putineanu	Dan	Cliniques Universitaires St. Luc	Brussels	Belgium
Vilcioiu	Daniel	Centrul Medical Provita	Bucharest	Romania

### National faculty

Bajurea	Nicolae	MEDPARK International Hospital	Chisinau	Moldova
Croitror	Gheorghe	MEDPARK International Hospital	Chisinau	Moldova

## Thursday, May 18, 2017

TIME	AGENDA ITEM	WHO
08:00-08:10	Welcome and introduction	A Betisor, A Ursache
08:10-08:25	The AO world—From history to lifelong learning	A Ursache
Module 1	Biology of bone and soft tissue	Moderator: A Ursache
08:25-08:40	Influence of the patient factors and the injury mechanism on fracture management	D Vilcioiu
08:40-08:55	The (soft-tissue) injury—a high priority consideration	D Vilcioiu
08:55–09:05	Review of learning outcomes of precourse eLearning module: The biology of bone healing	N Bajurea
09:05–09:15	Review of learning outcomes of precourse eLearning module: Müller AO Classification of fractures	A Betisor
09:15–09:35	Absolute stability: biomechanics, techniques, and fracture healing	A Ursache
09:35–09:55	Relative stability: biomechanics, techniques, and fracture healing	A Ursache
09:55–10:10	Fracture fixation using locking plates	G Dinu
10:10-10:30	COFFEE BREAK	
10:30–11:30	<b>AO Skills Lab</b> Note: participants spend 12 minutes at each station, then rotate clockwise	Moderator: N Bajurea
	Station A – Torque measurement of bone screws Station B – Soft-tissue penetration during drilling Station C – Heat generation during drilling Station D – Mechanics of bone fractures Station E – Fracture healing	D Putineanu A Betisor D Vilcioiu G Dinu A Ursache
11:30–11:45	COFFEE BREAK	
11:45–12:45	<b>AO Skills Lab</b> Note: participants spend 12 minutes at each station, then rotate clockwise	Moderator: N Bajurea
	Station F – Techniques of reduction Station G – Mechanics of intramedullary fixation Station H – Mechanics of plate fixation, part 1 Station J – Mechanics of plate fixation, part 2 Station K – Damaged implant removal	N Bajurea M Popescu A Ursache A Betisor D Vilcioiu
12:45-13:30	LUNCH BREAK	

### Thursday, May 18, 2017

TIME	AGENDA ITEM	WHO
13:30–14:30	Small group discussion 1 Discussion on general principles, classification, concepts of stability, their influence on bone healing, and how to apply implants to achieve appropriate stability Group 1 Group 2	A Ursache, N Bajurea D Putineanu, G Croitror
14:30–14:35	Location change to practicals	
14:35–15:40	Practical exercise 1 Internal fixation with screws and plates— absolute stability Table 1 Table 2	Moderator: A Ursache A Betisor, D Vilcioiu G Dinu, N Bajurea
15:40–15:45	Location change to lecture hall	
Module 2	Reduction and fixation of fractures	Moderator: A Betisor
15:45–16:05	Principles of diaphyseal fracture management— what is important in treating these fractures?	G Croitror
16:05–16:20	Reduction techniques of diaphyseal fractures— principles and methods	N Bajurea
16:20–16:35	COFFEE BREAK	
16:35–17:45	Practical exercise 2 Principle of the internal fixator using the locking compression plate Table 1 Table 2	Moderator: G Dinu A Ursache, G Croitror D Putineanu, D Vilcioiu
17:45–17:50	Location change to group discussions	
17:50-19:00	Small group discussion 2 Management principles for the treatment of diaphyseal fractures Group 1 Group 2 End of day 1	M Popescu, D Vilcioiu A Betisor, G Dinu
19.00		

## Friday, May 19, 2017

TIME	AGENDA ITEM	WHO
08:00–09:00	Practical exercise 3 Tibial shaft fractures_intramedullary nailing	Moderator: A Betisor
	Table 1 Table 2	M Popescu, N Bajurea D Putineanu, D Vilcioiu
09:00-09:05	Location change to lecture hall	A Betisor
09:05–09:20	Management principles for articular fractures— how do they differ from diaphyseal fractures?	A Betisor
09:20-09:35	Reduction techniques for articular fractures-principles and methods	A Betisor
09:35–09:55	COFFEE BREAK	
09:55–10:55	Practical exercise 4 Tibial fractures treated with different external fixator frame constructs—assessment of stability	Moderator: D Putineanu
	Table 1 Table 2	G Dinu, G Croitror A Ursache, N Bajurea
10:55-11:00	Location change to lecture hall	
Module 3	Upper limb	Moderator: M Popescu
11:00–11:15	Forearm fractures need understanding of principles for diaphyseal and articular fractures	M Popescu
11:15–11:30	Proximal humeral fractures—update on treatment protocols	D Vilcioiu
11:30–12:30	Preoperative planning—"plan your forearm operation" Templating exercise (in lecture room)"	M Popescu
12:30-13:30	LUNCH BREAK	

### Friday, May 19, 2017

TIME	AGENDA ITEM	WHO
13:30–14:40	Practical exercise 5 Operate your plan—fixation of a 22-C1 forearm fracture	Moderator: M Popescu
	Table 1 Table 2	A Betisor, D Vilcioiu A Ursache, G Dinu
14:40-14:45	Location change to lecture hall	
14:45-15:00	Distal radial fractures—which to fix? How to fix?	A Ursache
Module 4	Lower limb	Moderator: G Croitror
15:00-15:15	Fractures of the olecranon and patella	N Bajurea
15:15-15:30	Ankle fractures—a logical approach for their fixation	G Croitror
15:30-15:50	COFFEE BREAK	
15:50-16:20	Practical exercise 6	Moderator: N Bajurea
	Tension band wiring of the olecranon Table 1 Table 2	D Putineanu, G Croitror D Vilcioiu, A Ursache
16:20-17:20	Practical exercise 7	Moderator: G Croitror
	Management of a malleolar fracture type 44–B Table 1 Table 2	A Betisor, G Dinu M Popescu, N Bajurea
17:20–17:25	Location change to lecture hall	
17:25–17:40	Femoral neck fractures	A Betisor
17:40–17:55	Trochanteric fractures	M Popescu
17:55–18:10	Distal femoral fractures—management principles	G Croitror
18:10	End of day 2	

## Saturday, May 20, 2017

TIME	AGENDA ITEM	WHO
08:00–09:10	Practical exercise 8 Intramedullary nailing of a proximal femur using a proximal femoral nail anti-rotation	Moderator: M Popescu
	Table 2	A Ursache, N Bajurea D Putineanu, D Vilcioiu
09:10-09:15	Location change to lecture hall	
09:15-09:25	Tibial plateau fractures	G Dinu
Module 5	Special problems	Moderator: D Putineanu
09:25-09:35	Minimally invasive osteosynthesis (MIO)-when to use it?	D Putineanu
09:35-09:45	Radiation hazards	D Vilcioiu
09:45-10:05	COFFEE BREAK	
10:05–11:15	Small group discussion 3 Management principles for the treatment of articular fractures Group 1 Group 2	G Dinu, G Croitror A Ursache, D Vilcioiu
11:15-11:20	Location change to lecture hall	
11:20–11:35	Fractures in the growing skeleton—how are they different?	N Bajurea
11:35–11:50	Fixation principles in osteoporotic bone—the geriatric patient	D Putineanu
11:50-12:00	Implant removal—Why, when, and how?	M Popescu
12:00-13:00	LUNCH BREAK	

## Saturday, May 20, 2017

TIME	AGENDA ITEM	WHO
Module 6	Complications and difficult cases	Moderator: G Dinu
13:00–13:15	Treatment algorithms for the polytrauma patient	M Popescu
13:15–13:30	Emergency management of pelvic fractures— a critical skill can save lives	G Dinu
13:30–13:45	Management of open fractures	G Croitror
13:45-13:50	Location change to practical exercises	
13:50-15:00	Practical exercise 9 Stabilization of the pelvic ring using a large external fixator	Moderator: D Vilcioiu
	Table 1 Table 2	A Betisor, N Bajurea
15:00-15:20	COFFEE BREAK	
15:20-15:35	Infection after osteosynthesis—how to diagnose and manage	G Dinu
15:35-15:50	Delayed healing—causes and treatment principles	D Putineanu
15:50-15:55	Location change to small group discussions	
15:55–16:55	<ul> <li>Small group discussion 4</li> <li>Final case discussion on selected topic:</li> <li>Polytrauma</li> <li>Complications</li> <li>Special fractures. eg, geriatric fractures, osteoporosis, periprosthetic fractures</li> <li>Group 1</li> <li>Group 1</li> </ul>	D Putineanu, N Bajurea
16.55 17.00	Group 2	M Popescu, A Belisoi
16.55-17.00		
17:00-17:15	The future of fracture treatment	D Putineanu
17:15–17:25	Closing remarks	A Betisor, A Ursache
17:25	End of the course	

### Event organization

#### **AOTrauma Europe**

George Clay Clavadelerstrasse 8 7270 Davos, Switzerland Phone +41 81 414 27 25 Mobile: +41 79 458 70 97 Fax: +41 81 414 22 84 Email gclay@aotrauma.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 assessments. We rely on industrial/commercial partners for in-kind support to run simulations/skills training if educationally needed.

### Event information and logistics

#### AO Courses Europe, Middle East and Africa

Lilian Rubin Phone +41 32 720 46 70 Email rubin.lilian@ao-courses.com

#### **Event 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.

### General information

#### **Event fee**

AOTraumaCourse—BasicPrinciples of Fracture Management: EUR 50.00 Included in the event fee are, coffee break, lunch, course certificate

#### **Evaluation guidelines**

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

#### **Intellectual property**

Event 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.

Recording, photographing, or copying of lectures, practical exercises, case discussions, or any course materials is absolutely forbidden.

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

Wearing of a name tag is compulsory during lectures, workshops, and group discussions.

#### No insurance

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

#### Mobile phone use

Mobile phone use 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.



### Event venue and accommodation

#### Aria Hotel Chisinau

Alba-Julia 7/1, Chisinau Republic of Moldova www.ariahotel.md info@ariahotel.md Tel +373 (22) 999-171 Fax +373 (68) 477-778

### AO Foundation—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).

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 (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 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).

#### 5) Personnel

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

### Upcoming events

For more information visit www.aotrauma.org



# Driving excellence and empowering the next generation

### AOTrauma membership

Discover the advantages of joining the leading global trauma and orthopedic community, providing its members with education, research and networking opportunities worldwide.

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# Join us and share your passion