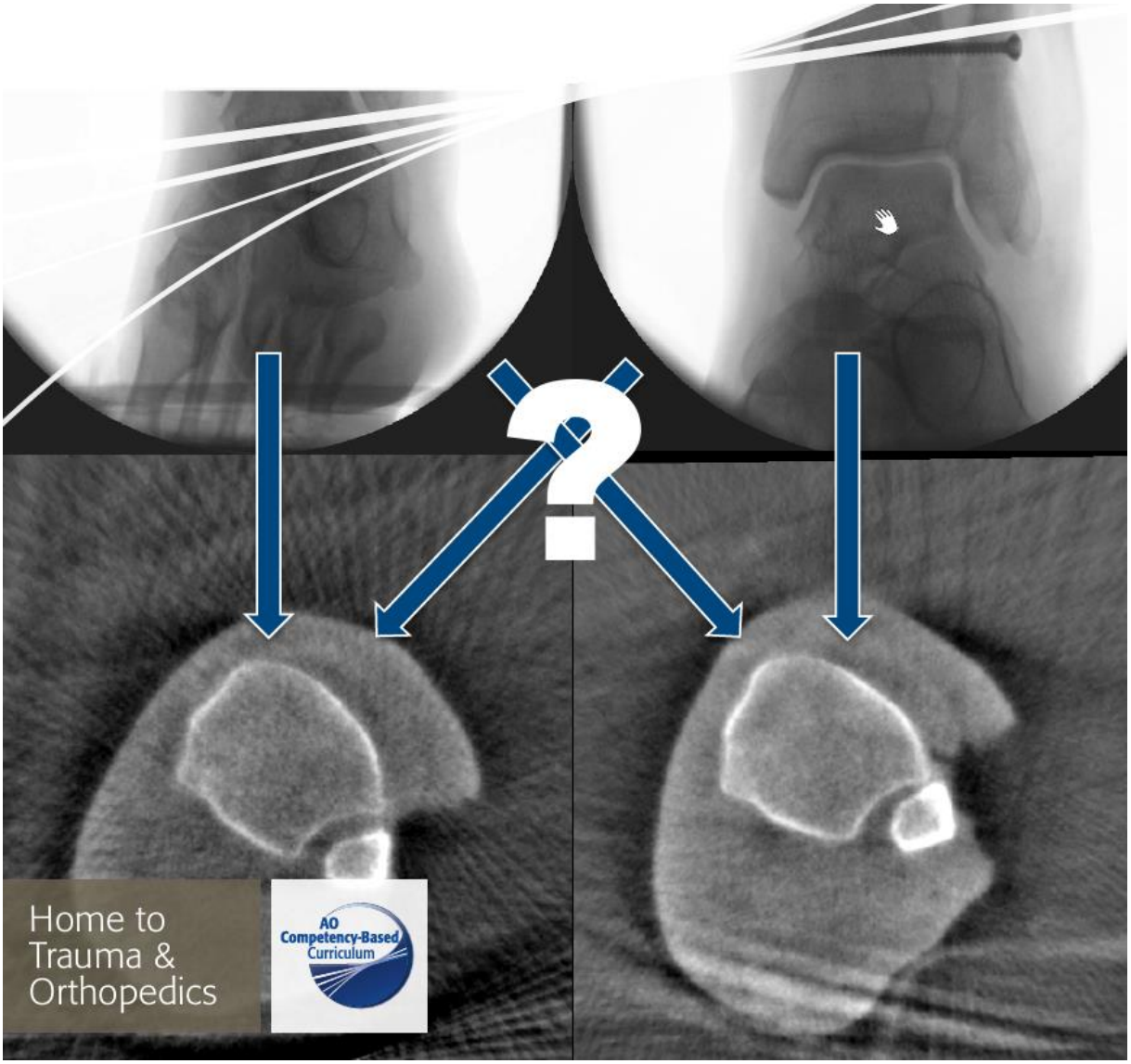
AO
TRAUMA
Europe and Southern Africa

# AO Trauma Course—

# Intraoperative Imaging

Hands-on 2-D and 3-D imaging exercises with anatomical specimens

September 24, 2020 | Erlangen, Germany | **EVENT PROGRAM**



## Mission

The AO's mission is promoting excellence in patient care and outcomes in trauma and musculoskeletal disorders.

## Purpose statement

AO Trauma 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 orthopedic 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

### 1

Fracture reduction and fixation to restore anatomical relationships.

### 2

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

### 3

Preservation of the blood supply to soft-tissues and bone by gentle reduction techniques and careful handling.

### 4

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

# Welcome

## Dear AO Trauma course participant,

We are honored to welcome you to the AOTrauma Course—Intraoperative Imaging. We hope you will enjoy your course and the entire experience.

What is AO Trauma? We are a "clinical division"—a community for trauma and orthopedics within the AO Foundation. As a clinical division we aim to integrate and align applied and clinical research, education, and community development functions into one direction—AO Trauma for the benefit of our members, stakeholders, and patients.

How can AO Trauma benefit you? By working as a single team, we focus and leverage our resources, expertise, and skills to create and deliver new and greater value to our members.

Why join AO Trauma? Joining AO Trauma means you are part of the trauma and orthopedic community within the AO. AO Trauma will help you develop lifelong friendships and relationships. We will help you access our “knowledge network” and take part in new opportunities that advance trauma care.

Yours sincerely,

**Wa'el Taha**
Chairperson AO Trauma
Education Commission

**Michael Baumgaertner**
Chairperson AO Trauma
International Board

**Reto Babst**
Chairperson AO Trauma
ESA Education Committee

Your experiences with us, over the next few days, will result in the realization of new and meaningful knowledge, skills, and understanding that we hope will translate into improved patient care.

# Course description

This highly interactive hands-on course is based on four common fractures where specific intraoperative imaging knowledge and skills are applied. In addition, general concepts such as appropriate indications, selection of 2-D or 3-D modalities, and radiation protection will be addressed. In each case scenario-based exercise, live intraoperative imaging is used to analyze injury patterns and assess fixation in anatomical specimens. Participants will work in groups with each person taking turns to lead the imaging tasks set in the simulated practical exercises.

# Goal of the course

This course aims to increase the ability of surgeons to assess the outcome of fixation procedures for common fractures using both 2-D and 3-D intraoperative imaging and identify and avoid complications.

# Target participants

- Surgeons at the threshold of becoming independent surgeons and taking over decision-making responsibility for the treatment of complex injuries (Advanced Principles level in AOTrauma's education).
- Surgeons in early years of post-residency practice who have an interest in improving their imaging quality

# Learning objectives

At the end of this course, participants will be better able to:

- Select 2-D and 3-D intraoperative imaging modalities based on indications for proximal humeral, distal radial, proximal femoral, and ankle fracture fixation
- Set up the operating room and equipment for fixation of the fractures listed above
- Perform intraoperative 2-D imaging and meet imaging quality criteria for each anatomical area
- Assess fracture reduction and implant positioning for these fractures
- Describe the indications for intraoperative 3-D imaging and review the benefits and limitations

# Chairpersons

**Mario Perl**
Friedrich-Alexander University Erlangen-Nürnberg, Erlangen, Germany

**Jochen Franke**
BG Trauma Centre Ludwigshafen, Ludwigshafen, Germany

# Regional Faculty

| | | | | |
|---|---|---|---|---|
| Nils | Beisemann | BG Trauma Centre Ludwigshafen | Ludwigshafen | Germany |
| Jochen | Franke | BG Trauma Centre Ludwigshafen | Ludwigshafen | Germany |
| Holger | Keil | Universitätsklinik Erlangen | Erlangen | Germany |
| Mario | Perl | Friedrich-Alexander University Erlangen-Nürnberg | Erlangen | Germany |
| Matevz | Tomazevic | University Medical Center Ljubljana | Ljubljana | Slovenia |

# Thursday

## September 24, 2020

| | | |
|---|---|---|
| 08:30–09:00 | Participant registration | |
| 09:00–09:10 | Welcome and introduction to the course | J Franke, M Perl |

### Module 1—Proximal humeral fractures

At the end of this module, participants will be better able to:

- Set up the operation room (OR) for proximal femoral fracture fixation, with appropriate positioning of the patient, C-arm, and personnel
- Identify anatomical landmarks on AP and lateral views and perform 2-D imaging
- Assess fracture reduction and implant positioning, with dynamic image intensification for screw position to decide if postop CT is necessary to evaluate

### Module 2—Distal radial fractures

At the end of this module, participants will be better able to:

- Identify anatomical landmarks on standard (AP and lateral) views
- Assess fracture reduction and implant positioning, with dynamic image intensification for screw position on 2-D imaging
- Set up the OR for 3-D imaging in the treatment of distal radius fractures
- Recognize the benefits of 3-D image intensification in the treatment of distal radius fractures

### Module 3—Proximal femoral fractures

At the end of this module, participants will be better able to:

- Set up the OR for proximal femoral fracture fixation, with appropriate positioning of the patient, C-arm, and personnel
- Identify anatomical landmarks on AP and lateral views and perform 2-D imaging
- Assess fracture reduction and implant positioning, with image intensification

| | | |
|---|---|---|
| | **Module 4—Ankle fractures**<br><br>At the end of this module, participants will be better able to:<br><br>• Evaluate reduction of upper ankle joint fractures with a syndesmotic injury<br>• Analyze the upper ankle joint with conventional radiography<br>• Recognize the benefits of 3-D image intensification in the treatment of upper ankle joint fractures | |
| | | |
| 09:10–10:40 | **Parallel session 1**<br><br>Group 1—Proximal humeral fractures<br><br>Group 2—Distal radial fractures<br><br>Group 3—Proximal femoral fractures<br><br>Group 4—Ankle fractures | All faculty |
| 10:40–10:55 | Coffee break | |
| 10:55–12:30 | **Parallel session 2**<br><br>Group 1—Distal radial fractures<br><br>Group 2—Proximal femoral fractures<br><br>Group 3—Ankle fractures<br><br>Group 4—Proximal humeral fractures | All faculty |
| 12:30–13:30 | Lunch break | |
| 13:30–15:00 | **Parallel session 3**<br><br>Group 1—Proximal femoral fractures<br><br>Group 2—Ankle fractures<br><br>Group 3—Proximal humeral fractures<br><br>Group 4—Distal radial fractures | All faculty |
| 15:00–15:15 | Coffee break | |

| | | |
|---|---|---|
| 15:15–16:45 | **Parallel session 4**<br>Group 1—Ankle fractures<br>Group 2—Proximal humeral fractures<br>Group 3—Distal radial fractures<br>Group 4—Proximal femoral fractures | All faculty |
| 16:45–17:00 | Wrap up and take-home messages | J Franke, M Perl |

# Event organization

**AOTrauma Education**

Bettina Bolliger

Clavadelerstrasse 8

7270 Davos Platz, Switzerland

Phone +41 81 414 27 22

Fax +41 81 414 22 84

Email: bbolliger@aotrauma.org

**AO funding sources**

Unrestricted educational grants from different sources are collected and pooled together centrally by the AO. 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 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 to ensure that this cooperation has no impact on the curricula, scientific program, or faculty selection.

# General information

**Event fee**

AOTrauma Course—Intraoperative Imaging: Euro 250.00

Included in the course are the documentation, coffee- and lunch break, and event certificate.

**Course language**

English / German

**Disclosures and conflicts of interest**

Disclosure information and potential conflicts of interest (COI) can be viewed at the event webpage:

http://AOTRAUMA10011490.aotrauma.org

**Evaluation guidelines**

All AO Trauma events apply the same evaluation process, which includes pre- and post-event online evaluation and on-site written questionnaires. These evaluation tools help ensure that AO Trauma continues to meet your training needs.

**Intellectual property**

Event materials, presentations, and case studies are the intellectual property of the event faculty.

All rights are reserved. For more information, please see: 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**

There will be a security check at the entrance of the building. Wearing of a name tag is compulsory during lectures, practical exercises, 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.

**Dress code**

Casual or sportswear

**Online resources**

available at www.aotrauma.org (AOTrauma, Education, Self-directed Learning: eg, Interactive video and eLearning modules, Surgery Reference)

# Event venue

Institut für Funktionelle und Klinische Anatomie
Friedrich-Alexander-Universität Erlangen-Nürnberg
Universitätsstraße 19
91054 Erlangen, Deutschland
www.anatomie.med.fau.de/koerperspende

# 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 AO network surgeons.
All education is planned based on needs assessment data, designed and evaluated using concepts and evidence from the most current medical education research, and reflects 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, US (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 (apart from the AO Foundation and its clinical divisions) 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**
In case simulations are chosen as an educational method to educate skills, we only use technology approved by the AO Technical Commission—a large independent group of volunteer surgeons developing and peer reviewing new technology.
More information about the AO Technical Commission and its development and approval processes can be found on the AO's website: www.aofoundation.org.

**5. Personnel**
Industry staff members are not permitted to interfere with the educational content or engage in educational activities during the event.