AO Trauma and AO Recon Course—
Comprehensive Periprosthetic Fracture Management of the Hip and Knee

December 5—7, 2019
Davos, Switzerland

Lecture room: Sertig
The AO’s flagship educational event, the AO Davos Courses offer surgeons at all stages of their career outstanding educational and networking opportunities. Experience this pioneering spirit of peer-to-peer collaboration and learn skills that will help advance your career.

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

Purpose statement
AO Recon is a global network of orthopedic surgeons committed to best-in-class education in joint preservation and replacement.

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 Davos Courses participant,

It is with great pleasure that we welcome you to the jointly developed, curriculum-based AO Trauma and AO Recon course. By addressing periprosthetic fractures, this course offers senior surgeons a holistic approach to this multifaceted subject.

Over the three-day program, world-class experts will lead lectures and deliver technical know-how in practical exercises to sharpen your professional understanding and develop your interdisciplinary skills.

The AO Davos Courses 2019 offer more than just a course experience. Your primary focus is active engagement in your course. In addition, we encourage you to:

- Interact with the international faculty and speak with staff and surgeons from across the AO’s clinical divisions, institutes and initiatives.
- Expand your professional network and establish new relationships with colleagues, including faculty and participants from all over the world.
- Visit the exhibits in the AO experience, gain insight into the AO center, and learn about the AO’s ongoing activities and the resources available to support you in your clinical work.

Your current knowledge level, attitudes, and skills will be challenged throughout the course. The best-in-class curriculum and faculty will provide you a memorable learning experience that will remain with you for a lifetime.

We hope that you will immediately transfer the insights and knowledge you gain here into your daily practice, in order to reach our shared goal of improving patient care through surgical excellence.

Yours sincerely,

Norbert P. Haas
AO Recon
Steering Board

Carsten Perka
AO Recon
Education Forum

Wa’el Taha
Chairperson
AO Trauma
Education Commission

Kodi Kojima
Chairperson
AO Trauma
International Board
Course description
The course is delivered using a combination of small group discussions, cases, exercises with anatomical specimens or other simulation materials (when appropriate), and summary lectures. All activities are moderated by expert faculty in a highly interactive learning environment. Participants are encouraged to discuss the cases and content in an open manner and to share their own experiences.

Goal of the course
This course aims to maximize patient outcomes following a periprosthetic fracture by improving the practicing surgeon’s ability to recognize, classify, plan, and perform internal fixation and revision procedures for total joint arthroplasty around the hip and knee prostheses.

Target participants
Senior, experienced (more than 5 years) consultant/practicing surgeons:
- General orthopedic surgeons
- Fracture specialists
- Arthroplasty specialists
- Surgeons experienced with both trauma and arthroplasty

Learning objectives
Upon completion of this course participants will be able to:
- Recognize the challenges of periprosthetic fracture management
- Explain the indications for internal fixation and revision arthroplasty (including intraoperative fractures)
- Apply techniques of internal fixation
- Apply techniques of revision arthroplasty
- Manage the patient with a periprosthetic fracture from a medical and orthogeriatric point of view
- Prevent and treat complications
- Follow up with the patient and optimize patient satisfaction
- Analyze treatment failures and recognize possible pitfalls in treatment
Chairpersons

Luigi Zagra
Milan, Italy

Karl Stoffel
Basel, Switzerland

International faculty

Michael Huo
Dallas, USA

Mark Reilly
Newark, USA

Regional faculty

Marco Berlusconi
Rozzano, Italy

Claudio Castelli
Bergamo, Italy

Theofilios Karachalios
Thessaly, Greece

Sam Oussedik
London, England

Richard Stange
Muenster, Germany

Martin Thaler
Innsbruck, Austria

National faculty

Olivier Borens
Lausanne, Switzerland

Henrik Eckardt
Basel, Switzerland
### Thursday

**Dec 5, 2019**

**Location:** Sertig

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00–13:00</td>
<td>Registration of participants</td>
</tr>
<tr>
<td>13:00–13:10</td>
<td>Welcome and introduction to the course</td>
</tr>
</tbody>
</table>

**Module 1**

**Moderator:** M Huo  
**General principles**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:10–13:20</td>
<td>Introduction to the problem—two cases with poor outcomes</td>
</tr>
<tr>
<td>13:20–13:30</td>
<td>Classification—principles and application</td>
</tr>
<tr>
<td>13:30–13:40</td>
<td>Imaging</td>
</tr>
<tr>
<td>13:40–13:55</td>
<td>Case-based lecture—Is the implant fixed well?</td>
</tr>
<tr>
<td>13:55–14:05</td>
<td>Questions and answers</td>
</tr>
<tr>
<td>14:05–14:50</td>
<td>Small group discussion 1: (Groups 1–6) Is the stem stable?</td>
</tr>
<tr>
<td>14:50–15:10</td>
<td>Coffee Break</td>
</tr>
</tbody>
</table>

**Module 2**

**Moderator:** T Karachalios  
**Revision arthroplasty around the hip**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>15:10–15:20</td>
<td>Indications for revision arthroplasty of the proximal femur</td>
</tr>
<tr>
<td>15:20–15:30</td>
<td>Surgical approaches and implant removal</td>
</tr>
<tr>
<td>15:30–15:45</td>
<td>Principles of revision and implant selection</td>
</tr>
<tr>
<td>15:45–15:55</td>
<td>Questions and answers</td>
</tr>
</tbody>
</table>

**Module 3**

**Moderator:** C Castelli  
**Revision arthroplasty around the knee**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>15:55–16:05</td>
<td>Indications for revision arthroplasty around the knee</td>
</tr>
<tr>
<td>16:05–16:15</td>
<td>Surgical approaches and implant removal</td>
</tr>
<tr>
<td>16:15–16:30</td>
<td>Principles of revision arthroplasty around the knee and implant selection</td>
</tr>
<tr>
<td>16:30–16:40</td>
<td>Questions and answers</td>
</tr>
<tr>
<td>16:40–17:30</td>
<td>Plenary case presentations and discussions Revision arthroplasty around the hip and knee 2-4 cases</td>
</tr>
<tr>
<td>17:30–18:30</td>
<td>Small group discussions 2: (Groups 1–6) Revision arthroplasty around the hip and knee</td>
</tr>
</tbody>
</table>
Friday
Dec 6, 2019

Location: Sertig

**Module 4**
**Moderator:** O Borens  
**Fracture fixation with implant retention**

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00–08:10</td>
<td>Indications for fixation</td>
<td>R Stange</td>
</tr>
<tr>
<td>08:10–08:25</td>
<td>Fixation options and biomechanical principles</td>
<td>M Reilly</td>
</tr>
<tr>
<td>08:25–08:35</td>
<td>Reduction and fixation of periprosthetic fractures around the femur</td>
<td>M Berlusconi</td>
</tr>
<tr>
<td>08:35–08:40</td>
<td>Questions and answers</td>
<td>All faculty</td>
</tr>
<tr>
<td>08:40–09:40</td>
<td><strong>Small group discussions 3: (Groups 1-6)</strong> Internal fixation cases around the proximal and distal femur</td>
<td>All faculty</td>
</tr>
<tr>
<td>09:40–10:00</td>
<td>Coffee Break</td>
<td></td>
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</tbody>
</table>

**Module 5**
**Moderator:** M Reilly  
**Other periprosthetic fractures**

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00–10:15</td>
<td>Periprosthetic acetabular fractures</td>
<td>H Eckardt</td>
</tr>
<tr>
<td>10:15–10:25</td>
<td>Periprosthetic fractures around the patella and proximal tibia</td>
<td>M Reilly</td>
</tr>
<tr>
<td>10:25–10:35</td>
<td>Questions and answers</td>
<td>All faculty</td>
</tr>
<tr>
<td>10:35–12:00</td>
<td><strong>Small group discussions 4: (Groups 1-6)</strong> Internal fixation and revision arthroplasty around the acetabulum, patella, and tibia</td>
<td>All faculty</td>
</tr>
<tr>
<td>12:00–13:00</td>
<td>Lunch Break</td>
<td></td>
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</tbody>
</table>

**Module 6**
**Moderator:** H Eckardt  
**Patient journey**

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:00–13:10</td>
<td>Management and optimization in the preoperative phase</td>
<td>R Stange</td>
</tr>
<tr>
<td>13:20–13:30</td>
<td>Questions and answers</td>
<td>All faculty</td>
</tr>
</tbody>
</table>

**Module 7**
**Moderator:** L Zagra  
**Special situations and complications**

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:30–13:40</td>
<td>Open reduction and internal fixation of B2/B3 fractures—is it a problem?</td>
<td>H Eckardt</td>
</tr>
<tr>
<td>13:40–13:50</td>
<td>Nonunion and malunion</td>
<td>K Stoffel</td>
</tr>
<tr>
<td>13:50–14:00</td>
<td>Bone loss management</td>
<td>M Huo</td>
</tr>
<tr>
<td>14:00–14:10</td>
<td>Megaprosthesis for the hip and knee—indications and limitations</td>
<td>S Oussedik</td>
</tr>
<tr>
<td>14:10–14:25</td>
<td>Infected periprosthetic fractures</td>
<td>O Borens</td>
</tr>
<tr>
<td>14:25–14:35</td>
<td>Questions and answers</td>
<td>All faculty</td>
</tr>
<tr>
<td>14:35–15:20</td>
<td><strong>Plenary case presentations and discussion</strong> Infected periprosthetic fractures (2 or 3 cases)</td>
<td>Moderator: L Zagra O Borens, R Stange, T Karachalios</td>
</tr>
<tr>
<td>15:20–15:40</td>
<td>Coffee Break</td>
<td></td>
</tr>
<tr>
<td>15:40–16:50</td>
<td><strong>Small group discussion 5: (Groups 1-6)</strong> Complications</td>
<td>All faculty</td>
</tr>
<tr>
<td>16:50–17:50</td>
<td>Personal cases from the participants or the faculty</td>
<td></td>
</tr>
<tr>
<td>17:50–18:00</td>
<td>Final questions, evaluation, and take-home messages</td>
<td></td>
</tr>
</tbody>
</table>
### Saturday
Dec 7, 2019

**Location: Hospital**

#### Module 8
**Moderator:** K Stoffel

**Anatomical specimen laboratory**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Speaker(s)</th>
</tr>
</thead>
</table>
| 07:30–07:45 | Transfer to the hospital  
Meeting point: Davos Congress Center, main entrance (07:30)                                   |             |
| 07:45–08:00 | Preparation for the anatomical specimen laboratory                                                 |             |
| 08:00–10:00 | **Anatomical specimen laboratory—revision arthroplasty around the hip (lateral position)**   
- Posterior approach to the hip  
- Plate osteosynthesis of posterior column  
- Head resection, creation of a contained acetabular defect with a small reamer, bone impaction grafting from the femoral head, and implantation of a hemispherical revision cup with additional screw fixation of the shell | C Castelli, M Reilly, L Zagra |
| 10:00–10:25 | Coffee Break                                                                                       |             |
| 10:25–13:10 | **Anatomical specimen laboratory—revision arthroplasty around the hip (lateral position)**   
- Extended trochanteric osteotomy (ETO) after broach insertion  
- Implantation of a modular revision stern  
- Refixation of ETO with cerclage wires and creation/fixation of fracture of greater trochanter | T Karachalios, K Stoffel, H Eckardt |
| 13:10–14:10 | Lunch Break                                                                                         |             |
| 14:10–14:15 | Preparation for the anatomical specimen laboratory                                                 |             |
| 14:15–16:15 | **Anatomical specimen laboratory—internal fixation (supine position)**   
- Insertion of a distal femoral nail  
- Interprosthetic fracture fixation with distal femoral condylar variable angle (VA) plate, cables, cerclages, locking attachment plate, periprosthetic screws  
- Medial approach to the distal femur, double-plate osteosynthesis distal femur | O Borens, M Berlusconi, S Oussedik |
| 16:15–16:50 | Extended dissections                                                                               | All faculty |
| 16:50–17:00 | Wrap-up summary and discussion  
Meeting point: Davos Congress Center, main entrance (17:00) | L Zagra, K Stoffel |
| 17:00–17:15 | Transfer to Davos Congress Center  
Meeting point: Davos Hospital, main entrance (17:00)                                               |             |
Event organization

AO Recon Education
Sina Henrichs
Clavadelstrasse 1
7270 Davos Platz
Switzerland
Phone +41 79 815 27 76
Email sina.henrichs@aorecon.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 and/or skills training if educationally necessary.

Event venue and opening times

Congress Center Davos
Talstrasse 49A
7270 Davos, Switzerland
Phone +41 81 414 62 00
Fax +41 81 414 62 29

General information
Sunday 12:00–19:00
Monday through Thursday 07:30–19:00
Friday 07:30–16:00

The AO experience
Sunday 14:00–17:00
Monday through Thursday 09:00–18:30 (Tuesday –20:30)
Friday 09:00–16:00

Industry exhibition
Sunday 14:00–17:00
Monday through Thursday 09:00–18:30
Friday 09:00–16:00
Exhibitions

The AO experience
The AO experience offers you the chance to view the latest publications in the AO library, see what benefits you are eligible for at the community and membership area and take a selfie with your new colleagues, explore AO teaching and learning resources and find out about our new digital gateway myAO at the digital zone’s interactive stations. Visit the innovation in research and development zone, to take part in hands on demo’s featuring some of our newest innovations, and join the AO Technical Commission’s popular Meet the Experts sessions, don’t forget to purchase any mementos at our store in the main entrance. Experience the AO spirit, walk the timeline of AO history, and mingle with other participants. AO staff will be on-hand to help you get the most out of this experience.

Exhibition partners
Visit the exhibitions of our trusted partner DePuy Synthes, Siemens, and other exhibitors: DePuy Synthes, SPI, Siemens, SYNBOKE, Invibio, Precision OS, Synoste, Rimasys, AO Alliance

Media exhibitors
Lehmanns Media is in the welcome area

Sponsors

We thank our trusted partner DePuy Synthes, and Siemens, for contributing in-kind support (materials and logistics) without which this event would not be possible. A special thanks to DePuy Synthes and Siemens for providing an unrestricted educational grant for this event.

We also extend our thanks to the following co-sponsors (educational grants, in-kind support):
**Business center**

The business center facilities in the Congress Centre Davos are accessible to everyone.

**Services**
- Internet and e-mail access
- Printer access
- www.aodavoscourses.org
  AO Davos Course website offering course-related information

**Opening hours**
The business center is open 30 minutes before the first course of the day starts until 30 minutes after the end of the last course of the day.

**Disclaimer**
The use of your own computer in the business center network is inherently not secure. We strongly recommend that you take appropriate actions to protect your computer against unauthorized use or theft (eg, firewall, virtual private network [VPN] connection, virus scanner).

AO cannot be held responsible for any data loss or theft.

For further information or support, please contact:
AO
Phone +41 81 414 28 70
E-mail it.helpdesk@aofoundation.org
aofoundation.org

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**Wireless network**

**How to connect to the AO wireless local area network (LAN)**

1. Open the Wireless Network Connection window
2. Choose the AO Business network as shown in the image below and click on the Connect button
3. Our AO Business wireless network requires a wireless protected access (WPA) network key: Network key: aowireless
4. Then click on the OK button
**Event information**

**Event fee**
AO Trauma and AO Recon Course—Comprehensive Periprosthetic Fracture Management of the Hip and Knee: CHF 4,100
The event fee covers the conference bag, documentation, coffee breaks, lunches, participation in AO Davos Courses night, and the course certificate.

**European CME Accreditation**
For this course the UEMS-EACCME® in Brussels have granted 21 European CME credits (ECMEC).

**Swiss CME Accreditation**
Additionally, an application has been made to the following Swiss societies:
Schweizerische Gesellschaft für Chirurgie (SGC/SSC)
Schweizerische Gesellschaft für Orthopädie und Traumatologie (SGO/SSO)

**Conflicts of Interest (COI)**
All disclosure information can be viewed at the event webpage: https://aorecon.aofoundation.org/disclosure.html

**Course certificate**
Course certificates will be available at the end of the event at the general information desk.

**Evaluation guidelines**
All AO Trauma and AO Recon 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 and AO Recon continue to meet your training needs.

**Use of social media**
During the AO Davos Courses 2019, you can post about your experience using the #AODavosCourses2019 hashtag. While we encourage you to share your AO Davos Courses 2019 experience with your online network, it is expressly forbidden to share any images or recordings from inside the course.

**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 lectures, practical exercises, case discussions, or any event materials is strictly forbidden. Participants violating intellectual property will be dismissed.**

The AO Foundation reserves the right to film, photograph, and audio record during its 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 the AO's marketing and other purposes, and that they may be made available to the public.

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

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

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

**Picture Gallery**
Check out aodavoscourses.org for a daily selection of pictures from the AO Davos Courses 2019, the best from last year’s courses, and a selection of photographs from the first-ever AO Davos Courses.

**Dress code**
Warm clothes and suitable shoes are recommended.
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, the technology used has been reviewed by the AO Technical Commission—a large independent group of volunteer surgeons developing and peer-reviewing new technology on behalf of the AO Foundation.

   Any technology used in the practical sessions of this event has been found suitable to serve the defined educational purposes. This does not imply any statement about its use in actual clinical scenarios.

   More information on the AO Technical Commission 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.
AO Research Institute Davos (ARI)

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

AO Research Institute Davos (ARI)
In its work to further the AO mission, ARI’s purpose is to advance patient care through innovative orthopedic research and development.

Orthopedics concerns musculoskeletal, spine and craniomaxillofacial trauma, degenerative musculoskeletal diseases, infections, and congenital disorders.

Goals
• Contribute high-quality, applied preclinical research and development focused toward clinical applications/solutions.
• Investigate and improve the performance of surgical procedures, devices and substances.
• Foster a close relationship with the AO medical community, academic societies, and universities.
• Provide research environment/support/training for AO clinicians.

Meet with our team including our ARI Medical Research Fellows, establish contacts, freely discuss your clinical problems and ideas, and learn about the latest results from ARI.

Collaborative research programs
• Annulus fibrosus rupture
• Acute cartilage injury
• Osteochondral defect

Craniomaxillofacial
• Imaging and planning of surgery, computer aided preoperative planning
• Medication-related osteonecrosis of the jaw
• Bone regeneration and 3-D printing

Spine
• Degeneration and regeneration of the intervertebral disc
• Biomarkers and patient outcomes

Trauma
• Bone infection, including the development and testing of active anti-infective interventions
• Sensing implants for objective monitoring of fracture healing
• Development of smart surgical tools
• New implant concepts for optimized bone healing
• Prediction of subject-specific risk of proximal humeral fixation failure via computational tools
• Development of generic Asian pelvic bone model
• Patient outcomes and biomarkers

Veterinary medicine
• Improving osteosynthesis for small and large animals

Multidisciplinary
• 3R principles: refinement of preclinical studies
• Bioreactor culture systems and mechanobiology
• Development, standardization, optimization, and improvement of preclinical models and methods
• Ex vivo testing using advanced biomechanical models
• Gene transfer: non-viral and viral
• Implant design using the finite element methods
• Implant positioning assistance, C-arm guided implant placement
• In-vivo and in-vitro quantification of bone turnover and scaffold degradation
• Medical additive manufacturing and biofabrication
• Medical computed tomography (CT) image processing and analysis
• Polymers to deliver cells and biological factors, create potential space for tissue development, and guide the process of tissue regeneration
• Prototype development and production
• Stem cell therapies for the treatment of bone, intervertebral disc, and cartilage defects

For the AO Research Institute Davos Activity Report 2018 and recent publications, go to www.aofoundation.org/ari/publications.
Notes
Upcoming AO Davos Courses 2020

**AO Davos Courses—November 29–December 4, 2020**
- AO Trauma Course—Basic Principles of Fracture Management
- AO Trauma Course—Advances Principles of Fracture Management
- AO Trauma Course—Advanced Principles of Fracture Management for Swiss residents
- AO Trauma Masters Course—Current Concepts
- AO Trauma Course—Pelvic and Acetabular Fracture Management
- AO Trauma Masters Kurs (German speaking)
- AO Trauma Course—Managing Pediatric Musculoskeletal Injuries
- AO Trauma and AO Recon Course—Comprehensive Periprosthetic Fracture Management of the Hip and Knee

**AO Davos Courses—December 6–9, 2020**
- AO Trauma Course—Basic Principles of Fracture Management for Swiss surgeons
- AO Spine Courses
- AO CMF Courses
- AO VET Masters Course—Small Animal
- AO VET Masters Course—Large Animal
- AO Recon Course—Principles in Shoulder Arthroplasty
- AO Recon Course—Complex Total Hip and Knee Arthroplasty
- AO PEER Course—Level 1 Principles of Clinical Research
- AO PEER Course—Level 2 Grant writing
- AO PEER Course—Level 2 GCP and study management
- AO PEER Course—Level 2 Publication writing course

This course list is subject to further change.
The final list of AO Davos Courses and worldwide courses will be available on www.aotrauma.org in January 2020.
Expand precision medicine through

a complete imaging portfolio for orthopedic trauma, spine and CMF surgery

Engineered to be truly patient-oriented, ARTIS pheno® is a unique floor-mounted robotic C-arm system for individualized preprocedural planning, intraoperative guidance, and immediate checkup in 2D and 3D directly in the hybrid operating room – regardless of patient condition or procedure complexity.

To provide 3D capabilities that can be seamlessly integrated into clinical routine, we developed Cios Spin®: a mobile 2D and 3D C-arm for intraoperative quality assurance.

Delivering new insights and perspectives, Cios Spin gives you more certainty in surgical routine – and full control over your procedures.

The new Cios Select mobile C-arm now makes flat-panel detector technology available in the medium price segment. This means that routine surgery can now also benefit from better image quality at a higher resolution and very low radiation exposure. For standard surgical procedures in particular, patient care can be improved without high investment costs.

* Cios Spin®, with VA30 is pending 510(k) clearance, and is not yet commercially available in the United States or in other countries. Due to regulatory reasons, its future availability cannot be guaranteed.
AO Recon is a global network of orthopedic surgeons committed to best-in-class education in joint preservation and replacement.