

**EduWeek** 2025

**4**

**Trauma**

## General Information

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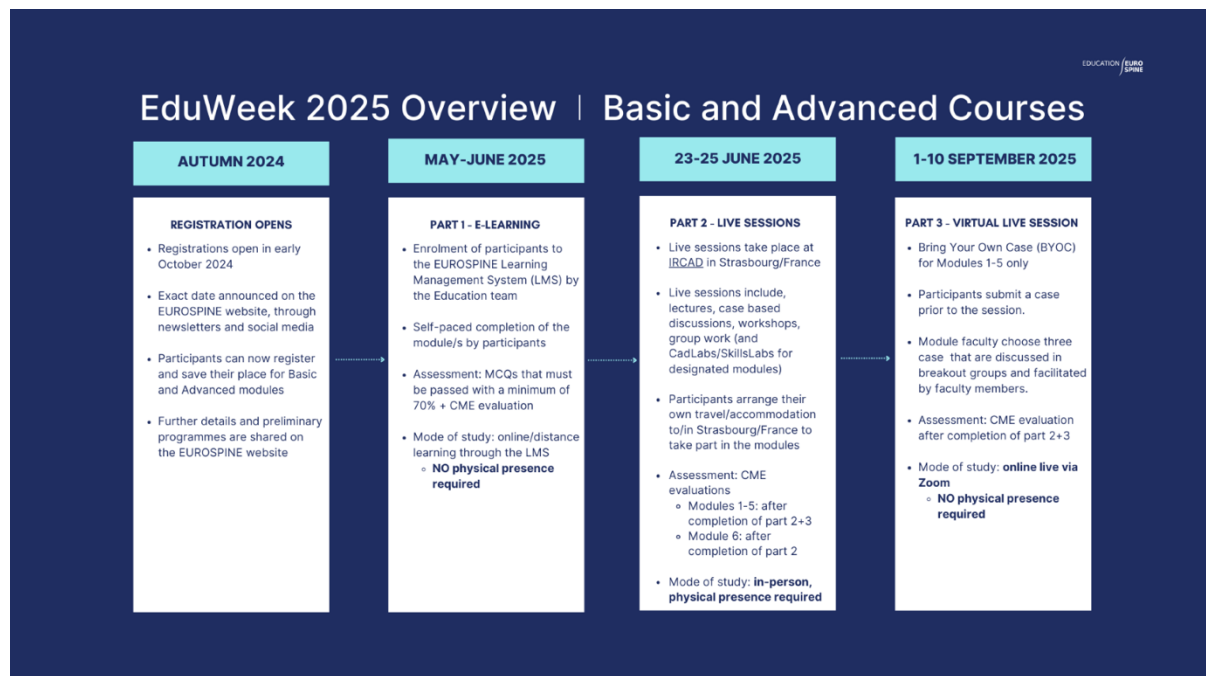
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### Module Chairs

Yu-Mi Ryang, Germany  
 Zdenek Klezl, Czech Republic

### Module Faculty

Lukas Bobinski, Sweden  
 Alberto Diez-Ulloa, Spain  
 Anas Dyab, Luxembourg  
 Felix Tomé Bermejo, Spain  
 Sven Vetter, Germany



## Quick Facts

<b>DATES &amp; TIMES</b>	<p><b>Live session</b>  Group 1: 24 June 2025 (13:50-18:30 CEST)  Group 2: 25 June 2025 (13:50-18:30 CEST)</p> <p><b>Virtual live session</b>  Group 1 and 2: 04 September 2025 (18:00-19:30 CEST)</p>
<b>LIVE SESSION VENUE</b>	IRCAD, 1 Place de l'Hôpital, 67000 Strasbourg, FRANCE
<b>MAX. ATTENDEES</b>	40 delegates (per group)
<b>REGISTRATON FEES</b>	EUROSPINE Member: €800 Non-member: €1,000
<b>CME CREDITS</b>	<p>The EUROSPINE Basic and Advanced Spine Surgery eLearning platform made available on <a href="https://eurospine.matrixlms.eu">https://eurospine.matrixlms.eu</a> and organized by EUROSPINE, the Spine Society of Europe is accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) to provide the following CME activity for medical specialists. The e-learning activity for this module is accredited with 3.5 CME credits.</p> <p>Only those e-learning materials that are displayed on the UEMS-EACCME® website have formally been accredited. Through an agreement between the Union Européenne des Médecins Spécialistes and the American Medical Association, physicians may convert EACCME® credits to an equivalent number of AMA PRA Category 1 Credits™. Information on the process to convert EACCME® credit to AMA credit can be found at <a href="https://edhub.ama-assn.org/pages/applications">https://edhub.ama-assn.org/pages/applications</a>.</p> <p>“The EduWeek 2025: Module 4: Trauma - Cohort 1, Strasbourg, France 24/06/2025 - 04/09/2025, has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) with 5.0 European CME credits (ECMEC®s). Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity.”</p> <p>“The EduWeek 2025: Module 4: Trauma - Cohort 2, Strasbourg, France 25/06/2025 - 04/09/2025, has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) with 5.0 European CME credits (ECMEC®s). Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity.”</p> <p>“Through an agreement between the Union Européenne des Médecins Spécialistes and the American Medical Association, physicians may convert EACCME® credits to an equivalent number of AMA PRA Category 1 Credits™. Information on the process to convert EACCME® credit to AMA credit can be found at <a href="https://edhub.ama-assn.org/pages/applications">https://edhub.ama-assn.org/pages/applications</a> .</p>

	“Live educational activities, occurring outside of Canada, recognised by the UEMS-EACCME® for ECMEC®s are deemed to be Accredited Group Learning Activities (Section 1) as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada.”
<b>LANGUAGE</b>	English
<b>DRESS CODE</b>	Smart casual
<b>E-LEARNING</b>	<p>A computer (Mac/PC) or tablet (Android/Mac) and stable internet connection are required to access the e-learning content.</p> <p>In preparation for the live session, the mandatory self-paced e-learning component will be available from May 2024 on the EUROSPINE Learning Management System (LMS). <u>This component must be completed before the live session.</u></p>
<b>MODULE COMPLETION</b>	<p>A module is only deemed as complete when participants have met <b>ALL</b> of the following conditions:</p> <ul style="list-style-type: none"> <li>• Passed the e-learning with at least 70% <b>AND</b></li> <li>• Attended the live session <b>AND</b></li> <li>• Attended the virtual BYOC live session <b>AND</b></li> <li>• Submitted the course evaluations for the e-learning and the (virtual) live session component</li> </ul>
<b>TARGET AUDIENCE</b>	Senior trainees and trained surgeons, who are planning a career in spine surgery.
<b>IMPORTANT (!)</b>	<ul style="list-style-type: none"> <li>• Completion of e-learning module is mandatory</li> <li>• Attendance of the live session and virtual live session is mandatory</li> <li>• Group 1 and 2 contain the same content. Participants are registered for ONE of the groups only!</li> <li>• Changing groups once registered is NOT possible!</li> </ul>

## PART 1 - E-learning Programme

(available from May 2025)

Time/ Duration	Topic	Faculty
<b>Trauma of C-spine, TL-spine &amp; Sacrum</b>		
00:22	Imaging of cervical trauma	F. Tomé Bermejo
00:25	Trauma of CO-C2: Classification and management	Y. Ryang
00:19	Lower cervical spine injuries	Z. Klezl
00:13	Imaging of thoracic/thoracolumbar trauma	A. Dyab

00:13	Classification and management of TL trauma	A. Diez Ulloa
00:14	Sacral fractures: classification and management	S. Vetter
00:20	Knowledge check questions	
Post-Traumatic Kyphosis, Metabolic Spine Diseases, Paediatric Trauma & Spinal Cord Injury		
00:28	Trauma of spine with ankylosing spondylitis: features & management	Y. Ryang
00:17	Osteoporotic fractures: diagnosis and management	F. Tomé Bermejo
00:12	Paediatric spinal fractures	S. Vetter
00:12	Prevention and management of post-traumatic kyphosis	A. Diez Ulloa
00:10	Spinal shock and incomplete spinal cord injury syndromes	L. Bobinski
00:20	Knowledge check questions	

## PART 2 - Live Session Programme

Group 1 – Room Lindbergh 24 June 2025	
13:50-16:00	Cases
16:00–16:15	Coffee break
16:15–18:30	Cases
18:30	End Group 1

Group 2 - Room Lindbergh 25 June 2025	
13:50–16:00	Cases
16:00–16:15	Coffee break
16:15–18:30	Cases
18:30	End Group 2

Case Based Discussions		
Introduction	Yu-Mi Ryang & Zdenek Klezl	
Topic List Group 1 and 2	Presenter	Expert opinion
Subaxial C-Spine Fracture	Ryang	Bobinski
Ankylosing spondylitis Fracture	Bobinski	Klezl
Multilevel T-L Fractures	Klezl	Vetter
Post Traumatic Kyphosis	Ulloa-Diez	Klezl
Osteoporotic Vertebral Compression Fracture (OVCF)	Bermejo	Ryang
Lumbopelvic instability	Vetter	Dyab
END OF LIVE SESSION		

## PART 3 - Virtual Live Session

### Bring Your Own Case (BYOC)

04 September 2025 18:00 – 19:30 CEST	
18:00-18:05	Introduction
18:05-18:25	Breakout session 1
18:25-18:30	Discussion 1
18:30-18:50	Breakout session 2
18:50-18:55	Discussion 2
18:55-19:00	Break
19:00-19:20	Breakout 3
19:20-19:25	Discussion 3
19:25-19:30	Wrap-up and conclusion
END OF MODULE	

## Learning Outcomes

- Select and interpret appropriate X-ray, computed tomography scan (CT) and magnetic resonance imaging (MRI) in spinal trauma.
- Classify fractures of cervical vertebrae (C0-C2), subaxial cervical spine (C-spine), thoracolumbar spine (TL-spine) and sacrum.
- Compare surgical and conservative treatment methods at different levels, including C0-C2, subaxial C-spine, TL-spine, and sacrum.
- Define special features of conditions, including ankylosing spondylitis (AS), osteoporosis and trauma of the immature spine.
- Plan how to prevent complications in spinal trauma
- Describe characteristics of spinal shock and spinal cord injury syndromes

## Trauma Of C-Spine, TL-Spine & Sacrum

### Imaging of Cervical Trauma

- Select appropriate imaging for suspected cervical spinal injury
- Evaluate options for X-ray views
- Select CT and/or MRI as appropriate
- Differentiate between the requirements following major and minor cervical spine trauma.

### Trauma of C0-C2: Classification & Management

- Define the role of ligaments in cervical spine stability
- Classify and relate to treatment
  - Occipital condyle fractures
  - Occipito-cervical dislocation
  - Occipito-atlantal dislocation
  - Axial atlanto-axial instability
  - Atlas (C1) fracture
  - Axis (C2) fracture
  - Traumatic spondylolisthesis C2

### Imaging of Thoracic/Thoracolumbar Trauma

- Use the AO classification
- Select appropriate imaging for major and minor trauma
- Assess X-ray images
- Define the indications of CT and MRI as appropriate
- Identify specific conditions with compromised spinal function

### Classification and Management of TL Trauma

- Recognise the signs and symptoms of TL spine trauma
- Differentiate Denis, AO and Thoraco-Lumbar Injury Classification and Severity Score (TLICS) classifications
- Explain the role of Posterior Ligamentous Complex (PLC) injuries for burst fractures
- Evaluate surgical techniques in:
  - Anterior surgery, including MIS techniques
  - Posterior surgery, including MIS techniques

### Sacral Fractures: Classification & Management

- Describe the relevant anatomy
- Differentiate sacral fracture types
- Use the AO classification
- Recognise the signs and symptoms of sacral fractures
- Compare surgical vs conservative treatment
- Evaluate surgical options

## Post-Traumatic Kyphosis, Metabolic Spine Diseases, Paediatric Trauma & Spinal Cord Injury

### Trauma of Spine with Ankylosing Spondylitis (AS): Features & Management

- Explain the aetiology of AS
- Define the role of the spine surgeon in AS
- Formulate a surgical management plan for AS fractures
- Anticipate difficulties in this patient population
- Explain what kind of imaging is mandatory and why

### Osteoporotic Fractures: Diagnosis & Management

- Define osteoporosis
- Describe the medical management of osteoporosis
- Summarise the diagnosis of osteoporotic fractures
- Use the AOSpine osteoporotic fracture classification
- Evaluate surgical options
- Outline the indications for vertebral augmentation procedures
- Outline indications for spinal instrumentation±Vertebral Body Replacement (VBR)

### Paediatric Spinal Trauma: Features & Management

- Outline features of the immature cervical and thoracolumbar spine
- Define Spinal cord injury without radiographic abnormality (SCIWORA)/ Cervicothoracic Spinal Cord Injury Without Radiographic Evidence of Trauma (SCIWORET)
- Explain the mechanism of:
  - C-spine injury
  - Lumbar apophyseal injuries
- Plan appropriate investigations and management of injuries

### Prevention and Management of Post-traumatic Kyphosis

- Discuss the reasons for post-traumatic kyphosis
- Formulate therapeutic goals
- Explain how to restore sagittal balance
- Evaluate surgical options
- Justify a multidisciplinary team approach

### Spinal Shock and Incomplete SCI Syndromes

- Explain spinal shock and its pathomechanism
- Define the different types of incomplete spinal cord injury
- Classify SCI by using the ASIA impairment scale and explain its clinical and surgical relevance
- Describe the clinical symptoms and pathomechanism of Central Cord Syndrome
- Discuss the importance of the timing of surgery
- Explain why there is no role for methylprednisolone in SCI (NASCIS I-III)



## Learning Outcomes – Bring Your Own Case (BYOC)

The module concludes with a virtual live session of Bring Your Own Case (BYOC). BYOC is a case-based learning session based on the participants' own practice or experience. Before the virtual live session, participants will be asked to submit a case on the module topic.

The cases are ideally the participants' own and should preferably present questions with no single right answer or dilemmas. The cases could also be from their own departments, and ideally, the participant should have had some personal connection or at least seen the case.

The cases will be shared with assigned faculty preceptors, who will process the cases and determine the line-up and order of discussion. Some cases may be grouped with those of other colleagues in discussion.

At the end of the session, participants will be able to:

- Synthesise background knowledge and principles on the topic (module name) and apply them to their own case and other cases presented
- Identify dilemmas and issues with their case and other cases presented
- Raise points and questions on their case and other cases presented
- Defend their positions regarding their case and the cases presented during the discussion
- Recognise and understand diverse perspectives from other participants and faculty
- Assimilate new ideas, new techniques and information, and adopt them appropriately in practice
- Formulate clinical decisions, strategies and generate possible solutions for their case and other cases presented

## Recommended Reading

Part IV Basic Module 4: Spinal Fractures. B. Meyer and M. Rauschmann (Eds.), Spine Surgery: A Case-Based Approach. Switzerland: Springer.

- M. Scholz and F. Kandziora. (2019). Epidemiology & Classification. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 223-232). Switzerland: Springer.
- P. Schleicher and F. Kandziora. (2019). Pre-Hospital Management, Physical Examination & Polytrauma Management. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 233-242). Switzerland: Springer.
- S. Krieg. (2019). Spinal Cord Injury. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 243-253). Switzerland: Springer.
- Y. Ryang. (2019). Upper Cervical Spine Trauma. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 253-268). Switzerland: Springer.
- R. Maduri and J. Duff. (2019). Subaxial Cervical Trauma. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 269-274). Switzerland: Springer.
- E. Kiter and N. Ok. (2019). Management Criteria for Thoracic, Thoracolumbar and Lumbar Fractures. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 275-280). Switzerland: Springer.

- Y-P. Charles. (2019). Posterior Surgical Management of Thoracic and Lumbar Fractures. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 281-288). Switzerland: Springer.
- J. Castein and F. Kandziora. (2019). Anterior Surgical Management of Thoracic and Lumbar Fractures. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 289-298). Switzerland: Springer.
- U. Yildiz and F. Kandziora. (2019). Sacral Fractures. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 299-308). Switzerland: Springer.
- M. Wostrack and B. Meyer (2019). Spine Injuries in the Elderly. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 309-318). Switzerland: Springer.
- D. Rothenfluh and D. Kieser. (2019). Spinal Trauma in Patients with Ankylosing Spinal Conditions. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 319-325). Switzerland: Springer