



EDUCATION **EURO
SPINE**

EduWeek 2024

24-26 JUNE | STRASBOURG, FRANCE

**Basic Module 4:
Trauma**

General Information

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*E-learning only

EduWeek 2024 Overview

Basic and Advanced Courses

| AUTUMN 2023 | MAY-JUNE 2024 | 24-26 JUNE 2024 | 3-6 SEPTEMBER 2024 |
|---|--|---|---|
| <p>REGISTRATION OPENS</p> <ul style="list-style-type: none"> Registrations open in early October 2023 Exact date announced on the EUROSPINE website, through newsletters and social media Participants can now register and save their place for Basic and Advanced modules Further details and preliminary programmes are shared on the EUROSPINE website | <p>PART 1 - E-LEARNING</p> <ul style="list-style-type: none"> Enrolment of participants to the EUROSPINE Learning Management System (LMS) by the Education team Self-paced completion of the module/s by participants Assessment: MCQs that must be passed with a minimum of 70% + CME evaluation Mode of study: online/distance learning through the LMS <ul style="list-style-type: none"> NO physical presence required | <p>PART 2 - LIVE SESSIONS</p> <ul style="list-style-type: none"> Live sessions take place at IRCAD in Strasbourg/France Live sessions include, lectures, case based discussions, workshops, group work (and CadLabs/SkillsLabs for designated modules) Participants arrange their own travel/accommodation to/in Strasbourg/France to take part in the modules Assessment: CME evaluations <ul style="list-style-type: none"> Modules 1-5: after completion of part 2+3 Module 6: after completion of part 2 Mode of study: in-person, physical presence required | <p>PART 3 - VIRTUAL LIVE SESSION</p> <ul style="list-style-type: none"> Bring Your Own Case (BYOC) for Modules 1-5 only Participants submit a case prior to the session. Module faculty choose three case that are discussed in breakout groups and facilitated by faculty members. Assessment: CME evaluation after completion of part 2+3 Mode of study: online live via Zoom <ul style="list-style-type: none"> NO physical presence required <p style="text-align: center; background-color: #00c090; color: white; padding: 2px; margin-top: 10px;">NEW in 2024</p> |

Quick Facts

| | |
|---------------------------|--|
| DATES & TIMES | <u>Live session</u> Group 1: 25 June 2024 (13:50-18:30 CEST) Group 2: 26 June 2024 (13:50-18:30 CEST) |
| | <u>Virtual live session</u> Group 1 and 2: 04 September 2024 (15:00-16:30 CEST) |
| LIVE SESSION VENUE | IRCAD, 1 Place de l'Hôpital, 67000 Strasbourg, FRANCE |
| MAX. ATTENDEES | 40 delegates (per group) |
| REGISTRATON FEES | EUROSPINE Member: €800 Non-member: €1,000 |
| CME CREDITS | <p>The EUROSPINE Basic and Advanced Spine Surgery eLearning platform made available on https://eurospine.matrixlms.eu 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 https://edhub.ama-assn.org/pages/applications.</p> <p>The live session accreditation is pending.</p> |
| LANGUAGE | English |
| DRESS CODE | Smart casual |
| E-LEARNING | <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> |
| MODULE COMPLETION | <p>A module is only deemed as complete when participants have met ALL of the following conditions:</p> <ul style="list-style-type: none"> • Passed the e-learning with at least 70% AND • Attended the live session AND • Attended the virtual BYOC live session AND • Submitted the course evaluations for the e-learning and the (virtual) live session component |

TARGET AUDIENCE Senior trainees and trained surgeons, who are planning a career in spine surgery.

IMPORTANT (!)

- Completion of e-learning module is mandatory
- Attendance of the live session and virtual live session is mandatory
- Group 1 and 2 contain the same content. Participants are registered for ONE of the groups only!
- Changing groups once registered is NOT possible!

PART 1 - E-learning Programme

(available from May 2024)

| Time/ Duration | Topic | Faculty |
|--|--|----------|
| Trauma of C-spine, TL-spine & Sacrum | | |
| 00:19 | Imaging of cervical trauma | Oner |
| 00:29 | Trauma of CO-C2: Classification and management | Ryang |
| 00:10 | Lower cervical spine injuries | Klezi |
| 00:19 | Imaging of thoracic/thoracolumbar trauma | Senköylü |
| 00:14 | Classification and management of TL trauma | Oner |
| 00:13 | Sacral fractures: classification and management | Kiter |
| 00:20 | Knowledge check questions | |
| Post-Traumatic Kyphosis, Metabolic Spine Diseases, Paediatric Trauma & Spinal Cord Injury | | |
| 00:38 | Trauma of spine with ankylosing spondylitis: features & management | Ryang |
| 00:16 | Osteoporotic fractures: diagnosis and management | Blatter |
| 00:14 | Paediatric spinal fractures | Kiter |
| 00:13 | Prevention and management of post-traumatic kyphosis | Senköylü |
| 00:13 | Spinal shock and incomplete spinal cord injury syndromes | Krieg |
| 00:20 | Knowledge check questions | |

PART 2 - Live Session Programme

| Group 1 25 June 2024 | |
|---------------------------------|--------------------|
| 13:50-16:00 | Cases |
| 16:00-16:15 | Coffee break |
| 16:15-18:30 | Cases |
| 18:30 | End Group 1 |

| Group 2 26 June 2024 | |
|---------------------------------|--------------------|
| 13:50-16:00 | Cases |
| 16:00-16:15 | Coffee break |
| 16:15-18:30 | Cases |
| 18:30 | End Group 2 |

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

PART 3 - Virtual Live Session

Bring Your Own Case (BYOC)

| 04 September 2024 15:00 – 16:30 CEST | |
|---|------------------------|
| 15:00-15:05 | Introduction |
| 15:05-15:25 | Breakout session 1 |
| 15:25-15:30 | Discussion 1 |
| 15:30-15:50 | Breakout session 2 |
| 15:50-15:55 | Discussion 2 |
| 15:55-16:00 | Break |
| 16:00-16:20 | Breakout 3 |
| 16:20-16:25 | Discussion 3 |
| 16:25-16:30 | 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 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
- Recognize 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 medical management of osteoporosis
- Summarize 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 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 of 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 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 the Bring Your Own Case (BYOC) virtual live session. The BYOC is a case-based learning session based on the participants own practice or experience. Participants will be asked to submit a case on the module topic before the virtual live session.

The cases are ideally the participant's own case 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 have 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 that 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 to their own case and other cases presented
- Identify dilemmas and issues with their own case and other cases presented
- Raise points and questions on their own case and other cases presented
- Defend their positions regarding their own case and 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 on their own 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. Schleichler 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