General Information

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Cordula Netzer, Switzerland
Florian Ringel*, Germany
Carmen Vleggeert-Lankamp*, The Netherlands

*E-learning only
# Quick Facts

## Dates & Times

**Live session**  
Group 1: 24 June 2024 (13:00-17:15 CEST)  
Group 2: 25 June 2024 (08:00-12:15 CEST)

**Virtual live session**  
Group 1 and 2: 04 September 2024 (17:00-18:30 CEST)

## Live Session Venue

IRCAD, 1 Place de l'Hôpital, 67000 Strasbourg, FRANCE

## Max. Attendees

40 delegates (per group)

## Registration Fees

EUROSPINE Member: €800  
Non-member: €1,000

## CME Credits

EACCME accreditation is currently pending.

## Language

English

## Dress Code

Smart casual

## E-Learning

A computer (Mac/PC) or tablet (Android/Mac) and stable internet connection are required to access the e-learning content.

In preparation for the live session, the mandatory self-paced e-learning component will be available from 1 April 2024 on the EUROSPINE Learning Management System (LMS). This component must be completed before the live session.

## Module Completion

A module is only deemed as complete when participants have met ALL of the following conditions:

- 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 1 April 2024)

<table>
<thead>
<tr>
<th>Time Duration</th>
<th>Topic</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>00:28</td>
<td>Vertebral Osteomyelitis. Aetiology, Pathogenesis, Symptoms and Diagnosis</td>
<td>Ivanov</td>
</tr>
<tr>
<td>00:11</td>
<td>Conservative treatment</td>
<td>Tessitore</td>
</tr>
<tr>
<td>00:22</td>
<td>Vertebral osteomyelitis: Indications for surgical decompression and instrumentation</td>
<td>Ringel</td>
</tr>
<tr>
<td>00:20</td>
<td>Knowledge check questions</td>
<td></td>
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</table>

### Metabolic Bone Disease

<table>
<thead>
<tr>
<th>Time Duration</th>
<th>Topic</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>00:12</td>
<td>Bone disorders</td>
<td>Tessitore</td>
</tr>
<tr>
<td>00:12</td>
<td>Osteoporosis (aetiology, diagnosis, drug therapy)</td>
<td>Vleggeert-Lankamp</td>
</tr>
<tr>
<td>00:50</td>
<td>Surgical considerations in disorders of the bone</td>
<td>Reynolds</td>
</tr>
<tr>
<td>00:20</td>
<td>Knowledge check questions</td>
<td></td>
</tr>
</tbody>
</table>

### Rheumatoid Arthritis (RA) And Ankylosing Spondylitis (AS)

<table>
<thead>
<tr>
<th>Time Duration</th>
<th>Topic</th>
<th>Faculty</th>
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</thead>
<tbody>
<tr>
<td>00:14</td>
<td>Rheumatoid arthritis</td>
<td>Vleggeert-Lankamp</td>
</tr>
<tr>
<td>00:30</td>
<td>Aetiology, pathogenesis, symptoms, diagnosis of AS</td>
<td>Ivanov</td>
</tr>
<tr>
<td>00:18</td>
<td>Stabilizing and corrective surgery of the TL spine in AS</td>
<td>Ringel</td>
</tr>
<tr>
<td>00:31</td>
<td>Diagnosis and treatment of the occipito-atlantoaxial complex in RA</td>
<td>Bolger</td>
</tr>
<tr>
<td>00:20</td>
<td>Knowledge check questions</td>
<td></td>
</tr>
</tbody>
</table>

### Tumours of the Axial Skeleton

<table>
<thead>
<tr>
<th>Time Duration</th>
<th>Topic</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>00:16</td>
<td>Benign tumours of the spine</td>
<td>Vleggeert-Lankamp</td>
</tr>
<tr>
<td>00:25</td>
<td>Primary tumours of the spine</td>
<td>Reynolds</td>
</tr>
<tr>
<td>00:27</td>
<td>Secondary malignant tumours diagnosis and management</td>
<td>Bolger</td>
</tr>
<tr>
<td>00:10</td>
<td>Complications and quality of life evaluation</td>
<td>Tessitore</td>
</tr>
<tr>
<td>00:20</td>
<td>Knowledge check questions</td>
<td></td>
</tr>
</tbody>
</table>
## PART 2 - Live Session Programme

<table>
<thead>
<tr>
<th>Group 1</th>
<th>24 June 2024</th>
<th>Group 2</th>
<th>25 June 2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:00–15:10</td>
<td>Cases</td>
<td>08:00–10:10</td>
<td>Cases</td>
</tr>
<tr>
<td>17:15</td>
<td>End Group 1</td>
<td>12:15</td>
<td>End Group 2</td>
</tr>
</tbody>
</table>

### Case Based Discussions

<table>
<thead>
<tr>
<th>Topic List Group 1 and 2</th>
<th>Faculty</th>
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</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>Tessitore/Reynolds</td>
</tr>
<tr>
<td>Vertebral osteomyelitis</td>
<td>TBC</td>
</tr>
<tr>
<td>Osteopenia</td>
<td>TBC</td>
</tr>
<tr>
<td>Rheumatoid arthritis</td>
<td>TBC</td>
</tr>
<tr>
<td>Osteosarcoma</td>
<td>Reynolds</td>
</tr>
<tr>
<td>Transoral surgery</td>
<td>TBC</td>
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</tbody>
</table>

**END OF LIVE SESSION**

## PART 3 - Virtual Live Session

**Bring Your Own Case (BYOC)**

<table>
<thead>
<tr>
<th>04 September 2024</th>
<th>17:00 – 18:30 CEST</th>
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</thead>
<tbody>
<tr>
<td>17:00-17:05</td>
<td>Introduction</td>
</tr>
<tr>
<td>17:05-17:25</td>
<td>Breakout session 1</td>
</tr>
<tr>
<td>17:25-17:30</td>
<td>Discussion 1</td>
</tr>
<tr>
<td>17:30-17:50</td>
<td>Breakout session 2</td>
</tr>
<tr>
<td>17:50-17:55</td>
<td>Discussion 2</td>
</tr>
<tr>
<td>17:55-18:00</td>
<td>Break</td>
</tr>
<tr>
<td>18:00-18:20</td>
<td>Breakout 3</td>
</tr>
<tr>
<td>18:20-18:25</td>
<td>Discussion 3</td>
</tr>
<tr>
<td>18:25-18:30</td>
<td>Wrap-up and conclusion</td>
</tr>
</tbody>
</table>

**END OF MODULE**
Learning Outcomes

Vertebral Osteomyelitis

Aetiology, Pathogenesis, Routes of Spread
- Explain the aetiology of vertebral osteomyelitis including bacterial, tuberculous, and fungal
- Describe the pathogenesis including venous route, arterial inoculation, and iatrogenic direct extension
- Anticipate the routes of spread: vertebral body & intervertebral disc

Symptoms & Diagnosis
- Recognise the signs and symptoms of vertebral osteomyelitis
- Identify the risk factors (immunodeficiency etc)
- Select appropriate investigations
- Distinguish on Magnetic Resonance Imaging (MRI) and x-ray the key features that define and contrast both pyogenic and tuberculous spinal lesions

Conservative Management & Indications for Surgical Treatment
- Evaluate options for conservative treatment
- Compare absolute and relative indications for conservative treatment

Metabolic Bone Diseases

Bone Disorders
- Paget’s disease
- Rickets
- Diffuse idiopathic skeletal hyperostosis (DISH) (Forestier’s disease)
- Metabolic bone disease

Osteoporosis
- Outline the aetiology of osteoporosis
- Diagnose osteoporosis using appropriate investigations

Surgical Considerations in Disorders of the Bone
- Evaluate treatment options
- Compare minimally invasive techniques including;
  - vertebroplasty
  - kyphoplasty
  - vertebral body stenting

Rheumatoid Arthritis and Ankylosing Spondylitis

Aetiology, Pathogenesis, Symptoms, Diagnosis
Module 5: Tumours and Inflammatory Diseases of the Spine

- Explain the aetiology of rheumatoid disease
- Describe the pathogenesis relating rheumatoid disease and joint changes
- Recognise the signs and symptoms
- Select and interpret appropriate investigations and imaging
- Recognise signs of
  - the rheumatoid spine
  - ankylosing spondylitis

Stabilizing & Corrective Surgery of the Spine
- Describe indications for corrective surgery for ankylosing spondylitis
- Diagnose occipito-atlantoaxial complex and subaxial cervical spine
- Differentiate between horizontal and vertical atlantoaxial instability

Diagnosis & Treatment of the Occipito-Atlantoaxial Complex
- Identify the commonly used radiographic lines and measurements for the C0 to C2 complex.
- Plan appropriate treatment for C0 to C2 and sub-axial rheumatic neck problems.
- Appraise current evidence regarding outcome and prognosis

Tumours of the Axial Skeleton

Primary Benign Tumours and Tumour Like Lesions; Diagnosis and Management
- Explain the aetiology of tumours and tumour-like lesions
- Describe the pathogenesis relating to tumours and tumour-like lesions
- Differentiate between primary benign tumours and tumour-like lesions
- Select appropriate investigations, interpret results, and stage tumour-like lesions
- Evaluate treatment options
- Anticipate outcomes
- Formulate a plan for long term monitoring

Secondary Malignant Tumours; Diagnosis and Management
- Justify the relative importance of combined tumour therapy including surgery, radiotherapy, and chemotherapy
- Evaluate surgical options and results
- Formulate a multidisciplinary management plan
- Justify the risks, benefits and impact of radiotherapy and chemotherapy
- Evaluate surgical options
- Anticipate complications

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**


• J. Gempt. (2019). Secondary Malignant Tumours (Diagnosis, Staging, Surgical Treatment and Adjuvant Therapy). B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 401-409). Switzerland: Springer