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SPPCV  
SOCIEDADE  
PORTUGUESA  
DE PATOLOGIA  
DA COLUNA  
VERTEBRAL

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# Spanish & Portuguese Spine Societies COURSE DIPLOMA

## Module 4

### Module 4:

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Trauma

### When:

—  
29 & 30 // June // 2018

### Where :

—  
Lisbon - Portugal

# Spanish & Portuguese Spine Societies COURSE DIPLOMA

## Scientific Content:

**Dr. Manuel Tavares de Matos**

President of Portuguese Spine Society (SPPCV)

**Dr. M.A. Díez Ulloa**

President of Spanish Spine Society (GEER)

## Course Organisation:

SPPCV Sociedade Portuguesa de Patologia da Coluna Vertebral

GEER Sociedad Española de Columna Vertebral

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## Learning Outcomes:

# Module 04 Trauma

1. Select & interpret appropriate Xrays, CT and MRI in spinal trauma
2. Classify fractures of C0-2, subaxial C-spine, TL-spine and sacrum
3. Compare surgical and conservative treatment methods at different levels, including C0-2, subaxial C, TL and sacral
4. Differentiate between special features of conditions including AS, osteoporosis and immature spine
5. Plan how to prevent complications in spinal trauma

## Learning Outcomes:

# Pre-Learning

Participants on Module 4 will be asked to prepare for the module by reviewing the AOSpine Thoracolumbar Spine Injury Classification System paper to establish a strong working knowledge of spine fracture classification. It is really important to be able to classify spine fractures

before joining the face-to-face component of the module. If you aren't fully conversant with fracture classification, you will struggle to join in. Review of the papers and the self-assessment should take no more than 1 hour.

## Rehabilitation Following Spinal Cord Trauma

- Plan how to minimise challenges and problems
- Describe specific rehabilitation techniques
- Predict outcome of rehabilitation

## Quick Facts

<b>When</b>	29 & 30 June 2018
<b>Where</b>	Lisbon / Portugal Course: Lusíadas Hospital Rua Abílio Mendes, 12 Cad Lab Workshops: Nova Medical School / Lisbon Nova University Campo dos Mártires da Pátria, 130
<b>Maximum Attendees</b>	30 delegates
<b>Registration Fee</b>	600 € for Members / 800 € for Non Members Discounts for SPPCV, GEER and EUROSPINE members are available <i>Modules with a discount structure of 10% for 2 modules and 15% for 3 modules</i>
<b>CME Credits</b>	13 European CME Credits (ECMEC) by EACCME
<b>Language</b>	English, Spanish, Portuguese
<b>Dress</b>	Casual
<b>Important Note</b>	Attendance at every session is mandatory A final exam will be performed

### Target Audience

Senior trainees and trained surgeons, who are planning a career in spinal surgery

Learning Outcomes:

# Section 01

## Cadaver Labs

**Cad Lab 1: MIS Vertebral Body Augmentation**

**Cad Lab 2: MIS: Percutaneous Pedicle Screw Placement & Augmentation**

## Cadaver Labs

### **Cad Lab 1: MIS Vertebral Body Augmentation**

- Perform a percutaneous approach to the pedicle
- Identify anatomical pedicle landmarks under fluoroscopy
- Position a Jamshidi needle/balloon in the vertebral body
- Perform vertebroplasty/kyphoplasty

### **Cad Lab 2 : MIS: Percutaneous Pedicle Screw Placement & Augmentation**

- Perform a percutaneous approach to the pedicle
- Identify anatomical pedicle landmarks under fluoroscopy
- Perform percutaneous pedicle screw and rod placement
- Perform screw cement augmentation

Learning Outcomes:

## Session 02

# Trauma: Cervical Spine

Imaging of Cervical Trauma

Trauma of CO-C2: Classification & Management

Trauma of Subaxial C-Spine: Classification & Management

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## Trauma: Cervical Spine

### Imaging of Cervical Trauma

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

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

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

### Trauma of Subaxial C-Spine: Classification & Management

- Estimate the incidence of and classify using the AO classification
    - Compression injuries
    - Flexion-extension-distraction injuries
    - Rotation injuries
  - Use other classifications to determine treatment and prognosis
  - Assess the Subaxial Injury Severity Score
  - Anticipate diagnostic pitfalls
  - Evaluate non surgical management options and when appropriate
  - Recognise indications for surgical management
    - Emergency
    - Urgent
    - Elective
    - Justify the anterior or posterior approach to surgery
-

Learning Outcomes:

## Session 03

# Trauma: Thoracolumbar Spine

Imaging of Thoracic/Thoracolumbar Trauma

Trauma of TL spine: management

Sacral Fractures: classification & management

## Trauma: Thoracolumbar Spine

### Imaging of Thoracic/Thoracolumbar Trauma

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

### Trauma of TL spine: management

- Recognise the signs and symptoms of TL spine trauma
- Differentiate between and evaluate Denis, AO and TLICS classifications
- Evaluate different radiological investigations
- Explain the role of PLC for burst fractures
- Evaluate surgical techniques in:
  - Anterior surgery including MIS techniques
  - Posterior surgery including MIS techniques

### Sacral Fractures: classification & management

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

Learning Outcomes:

# Session 04

## Trauma Topics

Trauma of Spine with Ankylosing Spondylitis: features & management

Osteoporotic Fractures: diagnosis & management

Paediatric Spinal Trauma: features & management

Prevention and Management of Post-traumatic Kyphosis

## Trauma:

### Trauma Topics

#### Trauma of Spine with Ankylosing Spondylitis: features & management

- Explain the aetiology of ankylosing spondylitis
- Define the role of the spine surgeon in AS
- Formulate a surgical management plan for fractures in AS
- Anticipate particular difficulties in this patient population

#### Osteoporotic Fractures: diagnosis & management

- Outline relevant demographics
- Describe medical management of osteoporosis
- Diagnose osteoporotic fractures
- Evaluate surgical options

#### Paediatric Spinal Trauma: features & management

- Outline features of the immature cervical and thoracolumbar spine
- Explain mechanism of:
  - C-spine injury
  - Lumbar apophyseal injuries
- Immobilise the patient safely
- Plan appropriate investigations and management of injuries

#### Prevention and Management of Post-traumatic Kyphosis

- Formulate therapeutic goals
- Explain how to restore sagittal balance
- Evaluate surgical options
- Justify a multidisciplinary team approach

Learning Outcomes:

# Section 05

## Biomaterials in Spine Surgery

Biomaterials in Spine Surgery

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## Biomaterials in Spine Surgery

### Biomaterials in Spine Surgery

- Evaluate different biomaterial options in spine surgery
  - Differentiate between Calcium-phosphate/Hydroxyapatite act osteoconductive, whereas Bone Morphogenetic Proteins act osteoinductive
  - Evaluate the options for cement stabilisation
  - Explain the mechanical behaviour of calcium phosphate and BMP
-



Learning Outcomes:

# Session 06

## Spinal Cord Injury

Spinal Shock and Incomplete Spinal Cord Injury Syndromes

Rehabilitation Following Spinal Cord Trauma

## Spinal Cord Injury

### Spinal Shock and Incomplete Spinal Cord Injury Syndromes

- Differentiate between neurogenic and spinal shock
- Assess the patient and select appropriate investigations
- Recognise relevant signs and symptoms in conscious and unconscious patients
- Resuscitate appropriately –L or even run an ATLS style moulage for a spine patient
- Prepare patients for safe transfer
- Define incomplete spinal cord injury
- Differentiate between anterior, central cord, posterior and Brown-Sequard syndrome
- Predict prognosis using ASIA classification

### Rehabilitation Following Spinal Cord Trauma

- Plan how to minimize challenges and problems
- Describe specific rehabilitation techniques
- Predict outcome of rehabilitation

## Course Chairmen:

**Manuel Tavares de Matos** PORTUGAL

**M.A. Díez Ulloa** SPAIN

## Cad Lab Chairmen:

**Carlos Jardim** PORTUGAL

**Manuel Tavares de Matos** PORTUGAL

## Course Faculty:

**Manuel Tavares de Matos** PORTUGAL

**M.A. Díez Ulloa** SPAIN

**Jorge Alves** PORTUGAL

**Domingo Lombao** SPAIN

**Filipa Faria** PORTUGAL

**Pedro Gonçalves Pereira** PORTUGAL

**Manuel Fernandez** SPAIN

**Rafael González** SPAIN

**Carlos Jardim** PORTUGAL

**Bruno Santiago** PORTUGAL

**J.P. Maia Gonçalves** PORTUGAL

## Scientific Programme Module 4

### Day 1 // Friday // 29 June

Time	Topic	Faculty
-	-	-
07.45 - 08.15	Course registration & welcome coffee	-
08.15 - 08.45	Cad Lab discussion	Manuel Tavares de Matos
08.45 - 09.00	Go to the lab	-
-	-	-
	<b>Session 1: Cadaver Lab</b>	
09.00 - 10.45	Group A: D12-L3 MIS Vertebral Body Augmentation, Percutaneous Pedicle Screw Placement & Augmentation	All Faculty
09.00 - 10.45	Group B: Postero-lateral lumbar approach (L4- S1) and pedicle placement	All Faculty
-	-	-
	Coffee Break (Group Rotation) 30 mins.	-
-	-	-
11.15 - 13.00	Group A: Postero-lateral lumbar approach (L4- S1) and pedicle placement	All Faculty
11.15 - 13.00	Group B: D12-L3 MIS Vertebral Body Augmentation, Percutaneous Pedicle Screw Placement & Augmentation	All Faculty
-	-	-
	Lunch 1 hour	-
-	-	-
14.00 - 14.10	Introduction	Manuel Tavares de Matos
-	-	-
	<b>Session 2: Trauma Cervical Spine</b>	
14.10 - 14.30	Imaging of Cervical Trauma	Pedro Gonçalves Pereira
14.30 - 14.50	Trauma of CO-C2: Classification & Management	Bruno Santiago
14.50 - 15.10	Trauma of Subaxial C-Spine: classification & management	M.A. Díez Ulloa
15.10 - 16.00	Case Discussion	Domingo Lombao: Moderator J.P. Maia Gonçalves: Case All Faculty: Case discussion
-	-	-
	Coffee Break 30 mins.	-
-	-	-
	<b>Session 3: Trauma Thoracolumbar Spine</b>	
16.30 - 16.50	Imaging of Thoracic/Thoracolumbar Trauma	Pedro Gonçalves
16.50 - 17.10	Trauma of TL Spine: management	Carlos Jardim
17.10 - 17.30	Sacral Fractures: classification & management	Jorge Alves
17.30 - 18.15	Case Discussion	Rafael González: Moderator Domingo Lombao: Case All Faculty: Case discussion
-	-	-
	<b>End of Day 1</b>	
-	-	-
	<b>Cadaver Lab Workshops:</b> we inform all the participants that there is a variety of different similar products that they can be use beyond the ones provided at this event.	<b>Course Attendance is Mandatory</b>

## Scientific Programme Module 4

### Day 2 // Saturday // 30 June

Time	Topic	Faculty
-	-	-
08.30 - 09.00	Attendance signature	-
-	-	-
	<b>Session 4: Trauma Topics</b>	
09.00 - 09.20	Trauma of Spine with Ankylosing Spondylitis: features & management	M.A. Díez Ulloa
09.20 - 09.40	Osteoporotic Fractures: diagnosis & management	J.P. Maia Gonçalves
09.40 - 10.00	Paediatric Spinal Trauma: features & management	M.A. Díez Ulloa
10.00 - 11.00	Case Discussion	Carlos Jardim: Moderator Manuel Tavares: Case All Faculty: Case discussion
-	-	-
	Coffee Break 30 mins.	-
-	-	-
11.30 - 11.50	Prevention and Management of PostTraumatic Kyphosis	Manuel Tavares de Matos
11.50 - 13.00	Case Discussion	Manuel Tavares de Matos: Moderator Carlos Jardim: Case All Faculty: Case discussion
-	-	-
	Lunch 1 hour	-
-	-	-
	<b>Session 5: Biomaterials in Spine Surgery</b>	
14.00 - 14.30	Biomaterials in Spine Surgery	Jorge Alves
14.30 - 14.50	Discussion	Manuel Fernández: Moderator
-	-	-
	<b>Session 6: Spinal Cord Injury</b>	
14.50 - 15.10	Spinal Shock & Incomplete Spinal Cord Injury Syndromes	Bruno Santiago
15.10 - 15.30	Rehabilitation Following Spinal Cord Trauma	Filipa Faria
15.30 - 16.30	Case Discussion	M.A. Díez Ulloa: Moderator Manuel Fernández: Case All Faculty: Case discussion
-	-	-
	Coffee Break 30 mins.	-
-	-	-
17.00 - 17.30	Evaluation	
17.30 - 17.45	Closing Remarks & Diploma	Manuel Tavares de Matos
-	-	-
	<b>End of Module</b>	
-	-	-

Course Attendance is Mandatory

# Contacts

## Sponsors

### EUROSPINE, the Spine Society of Europe:

-  
Seefeldstrasse 16  
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Switzerland  
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### GEER Sociedad Española de Columna Vertebral

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### SPPCV Sociedade Portuguesa de Patologia da Coluna Vertebral

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## Course Organisation

### SPPCV Sociedade Portuguesa de Patologia da Coluna Vertebral

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## Scientific Content

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Dr. Manuel Tavares de Matos, President of Portuguese Spine Society (SPPCV)  
Dr. M.A. Díez Ulloa, President of Spanish Spine Society (GEER)

**Thank you**  
**for audience.**

**Spanish & Portuguese Spine Societies**  
**COURSE DIPLOMA**  
**2018**

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