



Hellenic  
Spine  
Society

# Diploma of the Hellenic Spine Society

(equivalent to the Eurospine Diploma)

## MODULE 4: TRAUMA

**5 April 2019**

Athens Medical Group Amfitheater  
Kefalari Square, Athens, Greece



ATHENS MEDICAL  
GROUP

[www.dhss.gr](http://www.dhss.gr)

**Course Manager**

**Ioannis Magras**  
Associate Professor of Neurosurgery

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SCIENTIFIC  
PROGRAMME

## FACULTY

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### COURSE CHAIRS

Frank Kandziora  
Stavros Stavridis

### FACULTY

Dimosthenis Bouramas  
Alexandros Brodis  
Frank Kandziora  
Arion Kapinas  
Apostolos Karantanas  
Panagiotis Korovessis  
Ioannis Magras  
Elias Papadopoulos  
Konstantinos Paterakis  
Stavros Stavridis  
George Vissarakis

## LEARNING OUTCOMES MODULE 4

1. Select & interpret appropriate x-ray, 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 sacrum
4. Define special features of conditions including AS, osteoporosis and trauma of the immature spine
5. Plan how to prevent complications in spinal trauma
6. Describe characteristics of spinal shock and spinal cord injury syndromes

### DETAILED LEARNING OUTCOMES: SESSION 1 - TRAUMA CERVICAL SPINE

#### 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

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

- Estimate the incidence of and classify using the AO classification
- Use other classifications to determine treatment and prognosis
- Anticipate diagnostic pitfalls
- Evaluate non-surgical management options and when appropriate
- Recognise indications for surgical management
- Emergency

- Urgent
- Elective
- Justify different surgical approaches (anterior vs posterior, combined ant-post or post -ant)

### SESSION 2 – TRAUMA THORACOLUMBAR SPINE

#### 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

#### Trauma of TL spine: classification & management

- Recognise the signs and symptoms of TL spine trauma
- Differentiate Denis, AO and TLICS classifications
- 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 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

### **Trauma of Spine with Ankylosing Spondylitis and DISH: features & management**

- Explain the aetiology of ankylosing spondylitis
- Define the role of the spine surgeon in AS
- Formulate a surgical management plan for AS fractures
- Anticipate particular 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±VBR

### **SESSION 3 – PAEDIATRIC TRAUMA AND SCI TOPICS**

#### **Paediatric Spinal Trauma: features & management**

- Outline features of the immature cervical and thoracolumbar spine
- Define SCIWORA/SCIWORET
- Explain mechanism of:
  - C-spine injury
  - Lumbar apophyseal injuries
- Plan appropriate investigations and management of injuries

### **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)

### **Rehabilitation Following Spinal Cord Trauma**

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

### **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

### **SESSION 4 – POST-TRAUMATIC KYPHOSIS**

#### **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

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**SCIENTIFIC PROGRAMME,**  
**MODULE 4: TRAUMA / FRIDAY, 05 APRIL 2019**

COURSE ATTENDANCE IS MANDATORY

**COURSE CHAIRS: S. STAVRIDIS, F. KANDZIORA**  
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08.30-09.00 Course Registration & Welcome Coffee

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**09.00-10.30 / SESSION 1: TRAUMA CERVICAL SPINE**  
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- 09.00-09.10 Introduction**  
S. Stavridis, F. Kandziora
- 09.10-09.30 Imaging of Cervical Trauma**  
A. Karantanas
- 09.30-09.50 Trauma of CO-C2: Classification & Management**  
F. Kandziora
- 09.50-10.10 Trauma of Subaxial C-Spine: Classification & Management**  
I. Magras
- 10.10-10.30 Case Discussion**
- 10.30-11.00 Coffee Break

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**11.00-13.30 / SESSION 2: TRAUMA THORACOLUMBAR SPINE**  
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- 11.00-11.20 Imaging of Thoracic/Thoracolumbar Trauma**  
A. Karantanas
- 11.20-11.40 Trauma of TL Spine: Classification and management**  
K. Paterakis
- 11.40-12.00 Sacral Fractures: Classification & Management**  
P. Korovessis
- 12.00-12.20 Case Discussion**
- 12.20-12.40 Trauma of Spine with Ankylosing Spondylitis & DISH: Features & Management**  
F. Kandziora
- 12.40-13.00 Osteoporotic Fractures: Diagnosis & Management**  
S. Stavridis
- 13.00-13.30 Case Discussion**
- 13.30-14.30 Lunch Break

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## 14.30-16.00 / SESSION 3: PAEDIATRIC TRAUMA AND SCI TOPICS

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- 14.30-14.50 Paediatric Spinal Trauma: Features & Management**  
A. Kapinas
- 14.50-15.10 Spinal Shock & Incomplete Spinal Cord Injury Syndromes**  
D. Bouramas
- 15.10-15.30 Rehabilitation Following Spinal Cord Trauma**  
G. Vissarakis
- 15.30-15.50 Biomaterials in Spine Surgery**  
A. Brodis
- 15.50-16.00 Discussion**
- 16.00-16.30 Coffee Break

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## 16.30-17.30 / SESSION 4: POST-TRAUMATIC KYPHOSIS

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- 16.30-16.50 Prevention and Management of Post-Traumatic Kyphosis**  
E. Papadopoulos
- 16.50-17.20 Case Discussion**
- 17.20-17.30 Discussion-Closing remarks**
- 17.30 End of course**

## GENERAL INFORMATION

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### Modules

Module 1: Basic Comprehensive Course

Module 4: Trauma

### Registration Fees

Module 1: 300 euros

Module 4: 300 euros

Module 1 and 4: 500 euros

### Course Dates

4 - 5 April 2019

### Course Language

English

### Course venue

Athens Medical Group Amfitheater

Kefalari Square, Athens, Greece

### Organization

Hellenic Spine Society

### Course Secretariat

Premium / Congress & Social Events Solutions

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# Diploma of the Hellenic Spine Society

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**MODULE 1: BASIC COMPREHENSIVE COURSE**  
**MODULE 4: TRAUMA**

**4-5 April 2019**  
Athens, Greece

**Course Manager**

**Ioannis Magras**  
Associate Professor of Neurosurgery

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## NOTES

A series of horizontal dotted lines for taking notes.

**Organized by**



**Endorsed by**

