Madrid, Spain
11-12 November 2026

GEER
SPANISH SPINE SOCIETY

SPPCV
SOCIEDADE PORTUGUESA DE PATOLOGIA DA COLUNA VERTEBRAL

Spanish & Portuguese Spine Societies Course Diploma

Module 3

Spinal Deformities

PROGRAMME

Event Compliant
MedTech Europe
EMT Number: EMT-26-10136

Accredited by the European
Accreditation Council for Continuing
Medical Education (EACCME®)
with **13.0** European CME credits
(ECMEC®s)

Tecnical Secretariat:
López Garrido Viajes y Congresos (V. Villarreal)
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QUICK FACTS

WHEN:

11-12 November 2026

WHERE:

Madrid. Spain

Course Venue:

Hotel AC La Finca
Pº del Club Deportivo, 1. Ed. 17
Parque empresarial La Finca
Pozuelo de Alarcón
28223 Madrid

Cad-Lab Workshops:

Universidad Francisco de Vitoria
Carretera Pozuelo a Majadahonda, Km 1.800
Pozuelo de Alarcón
28223 Madrid

REGISTRATION FEE:

1500 € for Members*

1800 € for Non Members

*Discounts for GEER and SPPCV members are available

MAXIMUM ATTENDEES:

30 delegates

CME CREDITS:

Application for accreditation of continuing medical education

LANGUAGE:

English, Spanish and Portuguese (*The speaking is in Spanish or Portugues, but the slides are in English, live discussions are also in Spanish-Portuguese without translation available*)

DRESS:

Casual

IMPORTANT NOTE:

- Attendance at every session is mandatory.

COURSE CHAIRMEN

- **Javier Pizones Arce**. Spain
- **Tah Pu Ling.** Portugal

CAD LAB CHAIRMEN

- **Javier Pizones Arce**. Spain
- **Tah Pu Ling.** Portugal

COURSE FACULTY

- Teresa Bas Hermida
- Vitor Castro
- Rosa M. Egea Gámez
- Nicomedes Fernández-Baillo Gallego
- Simón Fuentes Caparrós
- Azucena García Martín
- Alejandro Gómez Rice
- Rafael González Díaz
- Sleiman Haddad
- Tah Pu Ling
- Antonio L. Pérez Abela
- André Pinho
- Javier Pizones Arce
- Pedro Antonio Rubio Belmar
- José Miguel Sánchez Márquez
- Felisa Sánchez-Mariscal Díaz
- Inmaculada Vilalta Vidal
- Lorenzo Zúñiga Gómez

TARGET AUDIENCE

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

LEARNING OUTCOMES
SESSION 1
PRINCIPLES OF SPINAL DEFORMITY & SURGICAL TREATMENT

SPINAL ALIGNMENT AND BALANCE

- Goals of surgery in the spinal deformity continuum
- Understand the concepts of alignment vs balance
- Know key spino-pelvic parameters and their limitations
- Understand the concept of spinal harmony
- Know compensation mechanisms

CASTING, BRACING AND THE ROLE OF REHABILITATION

- Justify the role of casting today
- Explain the pros and cons of different types of brace treatment
- Formulate principles of rehabilitation for patients with spine deformity, both paediatric and adult
- Define the role of halo traction as definitive or interim treatment

PREOPERATIVE ASSESSMENT AND POSITIONING

- Record a comprehensive preoperative assessment
- Consider special issues including pulmonary, cardiac, hematological, nutritional and metabolic
- Position patients safely
- Explain the rationale to other team members
- Compare the purpose of prone, lateral and supine positions

INTRAOPERATIVE MONITORING

- Select appropriate types of monitoring
- Differentiate between SEP and MEP
- Perform a safe and reliable wake up test
- Recognise when a wake up test is required
- Respond appropriately when monitoring indicates intervention required

BLOOD SAVING IN SPINAL DEFORMITY SURGERY

- Anticipate the factors affecting blood loss
- Recognize trigger points for transfusion
- Minimise the risks of homologous transfusion
- Outline the role of erythropoietin
- Compare the pros and cons of autologous transfusion, haemodilution, hypotensive anaesthesia, anti-fibrinolytic agents, intraoperative blood salvage

LEARNING OUTCOMES
SESSION 2
ADOLESCENT IDIOPATHIC SCOLIOSIS

PATHOGENESIS AND NATURAL HISTORY OF AIS

- Know concepts of development of AIS and subsequent implications for surgical treatment
- Describe the natural history of AIS

CLASSIFICATION AND SURGICAL INDICATIONS

- Know the pertinent classification systems and their limitations
- Understand and formulate surgical indications
- Goals of surgery for AIS

SELECTION OF FUSION LEVELS

- Use classification to determine the end limits of fusion (Lenke)
- Understand factors which may determine fusion levels such as curve flexibility, adding on etc.
- Define the lower and upper limit of instrumentation

SURGICAL STRATEGY: POSTERIOR APPROACH

- Formulate principles of surgical correction of AIS
- Understand the role of the sagittal plane in AIS and for surgical correction
- Evaluate strategic surgical options
- Recognise indications for a posterior or combined approach

SURGICAL STRATEGY: ANTERIOR APPROACH

- Differentiate between anterior release, anterior fusion and anterior instrumentation
- Select appropriate approach for procedure
- Recognise indications for
  - anterior approach
  - anterior instrumentation

LEARNING OUTCOMES
SESSION 3
SCOLIOSIS AND KYPHOSIS

NEUROMUSCULAR SCOLIOSIS

- Describe the aetiology and prognostic factors associated with neuromuscular scoliosis
- Identify factors indicating progression or risk to neurological structures
- Evaluate management options
- Assess associated pulmonary and cardiac problems

CONGENITAL SPINAL DEFORMITIES

- Relate the stages of development to deformities of the spinal cord
- Select appropriate investigations
- Evaluate treatment options

HYPERKYPHOSIS (CONGENITAL, SCHEUERMANN, ANKYLOSING SPONDYLITIS…)

- Differentiate between the aetiology and prognostic factors associated with regular and angular kyphosis
- Evaluate management options

CORRECTING HYPERKYPHOSIS

- Review the spinal osteotomy options
- Explain how to correct Scheuermann kyphosis versus congenital kyphosis

LEARNING OUTCOMES
SESSION 4
SPONDYLOLISTHESIS

SPONDYLOLISTHESIS: PATHOGENESIS AND CLASSIFICATION

- Describe the pathogenesis and causes of developmental spondylolisthesis
- Differentiate between high- and low-grade spondylolisthesis
- Know current classification systems

SPONDYLOLYSIS, LOW-GRADE OLISTHESIS

- Understand patho-anatomic features
- Know surgical indications
- Select appropriate surgical technique

HIGH-GRADE SPONDYLOLISTHESIS

- Describe the patho-anatomy of high-grade spondylolisthesis
- Differentiate between balance and unbalanced olisthesis
- Know different surgical techniques
- Understand the pros and cons of reduction vs. in situ fusion

LEARNING OUTCOMES
SESSION 5
CAD LAB PREPARATION

PEDICLE SCREW GUIDANCE IN DEFORMITY

- Assess appropriate placement
- Minimise the risk of misplacement
- Balance the pros and cons of spinal navigation
- Assess the advantages and disadvantages of freehand probing

SACRO-PELVIC FIXATION

- Choose different options of sacro-pelvic fixation
- Describe surgical technique for CadLab

LEARNING OUTCOMES
SESSION 6
ADULT SPINAL DEFORMITY

FROM THE DEGENERATIVE SPINE TO ADULT DEFORMITY

- Evaluate the lumbar spine in the context of spinal deformity
- Classify the continuum from the degenerative spine to deformity

ASSESSMENT OF ADULT DEFORMITY PATIENTS

- Identify common problems associated with adult deformity
- Differentiate between idiopathic and degenerative (de novo) deformity
- Use spino-pelvic parameters to assess degenerative deformities
- Evaluate operative and non-operative options for different age groups
- Consider comorbidities associated with age
- Define surgical indications
- Assess patient expectation

ADULT DEFORMITY PLANNING OF SURGICAL CORRECTION

- Formulate principles of surgical correction
- Plan surgical correction of adult spinal deformity
- Know current software planning tools
- Evaluate the appropriate techniques

SPINAL OSTEOTOMIES

- Justify the aim of osteotomy
- Differentiate between the different types of osteotomy (focus on posterior column and pedicle subtraction osteotomies)
- Technique of spinal osteotomies
- Outcomes and complications of spinal osteotomies

ANTERIOR-POSTERIOR TECHNIQUES TO TREAT SAGITTAL BALANCE DISORDERS

- Recognise indications for an anterior/lateral or combined with posterior approach
- Describe the amount of correction that can be achieved with each technique
- Know outcomes and complications of the different techniques/approach

LEARNING OUTCOMES
SESSION 7
CADAVER LABS

CAD LAB 1: ILLIO-SACRAL FIXATION: ILLIO-SACRAL SCREW PLACEMENT

- Identify key structures of the lumbo-sacral anatomy
- Identify the S1 screw entry points
- Relate anterior vascular structures and screw placement
- Prepare iliac screw holes
- Integrate safety measures and assess risks
- Place iliac instrumentation and connect to the lumbo-sacral construct

CAD LAB 2: THORACIC PEDICLE SCREW FIXATION & HYBRID SOLUTIONS

- Approach the posterior thoracic spine
- Identify anatomical screw entry points
- Anticipate the risks and pitfalls
- Perform free hand technique to prepare a screw hole
- Check integrity of screw hole by pedicle probe
- Place pedicle screw
- Prepare facet joint and place pedicle hook
- Place transverse process and lamina hooks

Scientific Programme

Chairmen: **Javier Pizones Arce & Tah Pu Ling**
Chairmen CAD LAB: **Javier Pizones Arce & Tah Pu Ling**

Course attendance is mandatory

DAY 1. WEDNESDAY, 11 NOVEMBER

TIME	TOPIC	FACULTY
08:00-08:20	Course Registration	
08:20-08:35	Introduction	Javier Pizones Arce
	SESSION 1: PRINCIPLES OF SPINAL DEFORMITY & SURGICAL TREATMENT	
08:35-08:50	Spinal Alignment and Balance	Felisa Sánchez-Mariscal Díaz
08:50-09:10	Casting, Bracing and Role of Rehabilitation	José Miguel Sánchez Márquez
09:10-09:25	Preoperative Assessment and Positioning	André Pinho
09:25-09:40	Intraoperative Monitoring	Vitor Castro
09:40-09:50	Blood Saving in Spinal Deformity Surgery	André Pinho
09:50-10:00	Discussion	All Faculty
10:00-10:30	**Coffee Break**	
	SESSION 2: ADOLESCENT IDIOPATHIC SCOLIOSIS	
10:30-10:45	Pathogenesis and Natural History of AIS	Tah Pu Ling
10:45-10:55	AIS: Classification and Surgical Indications	Inmaculada Vilalta Vidal
10:55-11:05	Selection of AIS Fusion Levels	Teresa Bas Hermida
11:05-11:20	Surgical Strategy: Posterior Approach	Azucena García Martín
11:20-11:35	Surgical Strategy: Anterior Approach	Pedro Antonio Rubio Belmar
11:35-11:45	Discussion	All Faculty
11:45-12:30	Case-Based Discussion	Tah Pu Ling
12:30-13:30	**Lunch**	
	SESSION 3: SCOLIOSIS AND KYPHOSIS	
13:30-13:50	Neuromuscular Scoliosis	Antonio L. Pérez Abela
13:50-14:10	Congenital Spinal Deformities	Rosa M. Egea Gámez
14:10-14:25	Hyperkyphosis (Congenital, Scheuermann, Ankylosing Spondylitis)	Inmaculada Vilalta Vidal
14:25-14:40	Surgical Strategy for Correcting Hyperkyphosis	Rosa M. Egea Gámez
14:40-14:50	Discussion	All Faculty
14:50-15:20	Case-Based Discussion	All Faculty
15:20-15:50	**Coffee Break**	
	SESSION 4: SPONDYLOLISTHESIS	
15:50-16:05	Spondylolisthesis: Pathogenesis and Classification	Vitor Castro
16:05-16:20	Spondylolysis and Low-Grade Olisthesis	Inmaculada Vilalta Vidal
16:20-16:35	High-Grade Spondylolisthesis	Rafael González Díaz
16:35-16:45	Discussion	All Facutly
16:45-17:30	Case-Based Discussion	Felisa Sánchez-Mariscal Díaz
	SESSION 5: CAD LAB PREPARATION	
17:30-17:45	Pedicle Screw Guidance in Deformity	Alejandro Gómez Rice
17:45-18:00	Sacro-Pelvic Fixation	Lorenzo Zúñiga Gómez

END OF DAY 1

Course attendance is mandatory

DAY 2. THURSDAY, 12 NOVEMBER

TIME	TOPIC	FACULTY
09:10-09:30	**Coffee and Attendance Signature**	
	SESSION 6: ADULT SPINAL DEFORMITY	
09:30-09:50	From Degenerative to Adult Deformity	Sleiman Haddad
09:50-10:10	Assessment of Adult Deformity Patients	Sleiman Haddad
10:10-10:30	Adult Deformity Planning of Surgical Correction	Javier Pizones Arce
10:30-10:50	Spinal Osteotomies	Simón Fuentes Caparrós
10:50-11:10	Anterior-Posterior Techniques to Treat Sagittal Balance Disorders	Nicomedes Fernández-Baillo Gallego
11:10-11:30	Discussion	All Faculty
11:30-12:00	Closing Remarks, Diploma and Mandatory Course Evaluation	Javier Pizones Arce
12:00-13:00	**Lunch**	
13:00-13:30	Shuttle bus service to Universidad Francisco de Vitoria	
	SESSION 7: CADAVER LABS	
13:30-13:45	Go to the Lab	
13:45-15:30	Pedicle Screw Guidance in Deformity	Vitor Castro Nicomedes Fernández-Baillo Gallego Simón Fuentes Caparrós André Pinho Tah Pu Ling Lorenzo Zúñiga Gómez
15:30-16:00	**Coffee Break**	
16:00-17:45	Sacro-Pelvic Fixation	Vitor Castro Nicomedes Fernández-Baillo Gallego Simón Fuentes Caparrós André Pinho Tah Pu Ling Lorenzo Zúñiga Gómez

END OF MODULE

Recommended Reading

Part III Basic Module 3: Deformity. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach. Switzerland: Springer

- M. Balsano and S. Negri. (2019). Natural Course and Classification of Idiopathic Scoliosis. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 141-148). Switzerland: Springer.
- M. Balsano and S. Negri. (2019). Diagnosis and Conservative Treatment of Adolescent Idiopathic Scoliosis: Case Presentation. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 149-152). Switzerland: Springer.
- U. Liljenqvist. (2019). Idiopathic Scoliosis: Operative Treatment. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 153-158). Switzerland: Springer.
- A. Senkoylu and E. Acaroglu. (2019). A Congenital Scoliosis Case Characterized with Contralateral Hemivertebrae. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 159-164). Switzerland: Springer.
- S. Nuñez-Pereira and F. Pellisé. (2019). Delayed Neurological Deficit and Surgical Site Infection After Pedicle Subtraction Osteotomy in a Revision Case. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 165-172). Switzerland: Springer.
- D. Jeszenszky and M. Loibl. (2019). Operative Treatment of High-Grade Spondylolisthesis. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 173-184). Switzerland: Springer.
- A. Toquart and C. Barrey. (2019). Parameters of Spino-Pelvic Balance, Etiology and Pathogenesis of Disturved Spino-Pelvic Balance. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 185-196). Switzerland: Springer.
- M. Arabmotlagh and M. Rauschmann. (2019). Diagnosis, Classification and General Treatment Options for Hyperkyphosis. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 197-202). Switzerland: Springer.
- M. Arabmotlagh and M. Rauschmann. (2019). Scheuermann Kyphosis and Ankylosing Spondylitis. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 2013-210). Switzerland: Springer.
- S. Haddad, A. Matamalas, and F. Pellisé. (2019). Surgical Correction and Special Features in Traumatic and Congenital Kyphotic Deformities. B. Meyer and M. Rauschmann (Eds.), Spine Surgery A Case-Based Approach (pp. 211- 221). Switzerland: Springer.

Notes

Notes

Sponsors

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B BRAUN SHARING EXPERTISE

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Course Organisation

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