Final Programme

EUROSPINE 2018
19–21 September 2018
CCIB – Barcelona International Convention Centre, Spain
www.eurospine2018.eu
EUROSPINE App 8.0

Download the new version of the EUROSPINE smartphone app from the App Store and enhance your conference experience with its features:

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- Have the full congress programme in your pocket – abstracts, speakers, sessions and lecture rooms.
- Let the interactive floor plans guide you to seminar rooms, halls and exhibition booths.
- Enjoy all the latest conference information both online and offline.
- Bookmark your favourite sessions and automatically get reminded by the app.
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Bienvenidos - Benvinguts!

The upcoming 2018 annual EUROSPINE meeting and congress in Barcelona will be the scientific highlight of the year for all spine professionals and experts in Europe and beyond.

EUROSPINE 2018 not only provides its visitors with an outstanding scientific programme and the latest in spine research, treatment methods, and healthcare, it also allows for numerous opportunities to meet renowned specialists from all continents and mingle with your colleagues from around the globe.

EUROSPINE 2018 takes place at the CCIB – the Barcelona International Convention Centre, which is conveniently located close to the heart of the city. The CCIB also stands out for its modern presentation amenities and offers excellent access to the city’s public transportation system and many hotels in walking distance. Just the perfect place to focus on spine!

With 4.7 million people, Barcelona is the capital city of the community of Catalonia and the largest metropolis on the Mediterranean Sea. It has a lot to offer, we would like to encourage you to check out the numerous cultural and architectural prospects.

EUROSPINE 2018 provides a very attractive programme which will allow all meeting participants to enjoy striking presentations, excellent seminars and research panels, allowing you to take up the latest information and techniques and to bring them back home.

See you in Barcelona!

Luis Alvarez Galovich, Ferran Pellisé, Juan Bago
Local Hosts 2018
Welcome Message of the President

Dear members, dear colleagues, guests and friends,

It is my pleasure and a great honour to welcome you to the EUROSPINE Annual Meeting 2018 in Barcelona, the beautiful and world famous pearl at the Mediterranean Sea. This Annual Meeting marks 20 years of EUROSPINE, the Spine Society of Europe.

EUROSPINE, as the largest spine society in Europe with its constantly growing number of members, gives us the opportunity to continuously expand the horizon of knowledge and research with regards to excellent spine care. During our Annual Meeting several thousand participants from more than 80 countries gather with their colleagues to exchange knowledge, skills and the latest advances in research and clinical findings in order to improve our patients’ treatment and ensure the best spine care possible.

Among other amazing things, this meeting happens to take place in one of the most striking conference places. Our venue is the CCIB, Barcelona International Convention Center, a very modern location which offers all amenities one can expect.

Our local hosts Luis Alvarez, Ferran Pellisé and Juan Bago keep a very diverse networking programme ready, which offers ample opportunity to establish new contacts and deepen existing ones. Enjoy the local attractions such as museums and ancient history of the lovely city.

As I am really excited and looking forward to sharing these four days with you and hoping that you will enjoy networking and learning about the best in spine, all that is left for me is to once again welcome you all in Barcelona to our EUROSPINE Annual Meeting 2018 for our 20th anniversary.

Frank Kandziora
EUROSPINE President 2017-2018
Addresses & Important Dates / Programme Highlights

EUROSPINE Administrative and Scientific Secretariat
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Congress organisation, sponsorship & exhibition management

Mondial Congress & Events
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M: eurospine2018@mondial-congress.com
www.mondial-congress.com

IMPORTANT DATES

Exhibition Opening & Welcome Reception
Wednesday, 19 September, 17:30–18:30
Exhibition Area & Entrance Foyer

Medal Lecture (Martin E. Schwab)
Thursday, 20 September, 10:30–12:00
Plenary Hall

EUROSPINE Members’ Cocktail
(by invitation only)
Thursday, 20 September, 17:10
Foyer Level 1

EUROSPINE General Assembly
(members only)
Thursday, 20 September, 17:30
Meeting Room 111

Official Congress Evening, Café del Mar
(at own expense)
Thursday, 20 September, 20:00

EUROSPINE ‘Best of Show’ and Award Papers
Friday, 21 September, 10:30–12:00
Plenary Hall (see page 41)
Audience Response System (ARS)
Due to its great success at past EUROSPINE congresses the Audience Response System will be used again during the main sessions to ensure an interactive learning experience for all participants.
To participate in an interactive session, please download the EUROSPINE smartphone app: eurospine.app or via your app store/google play store (search key: EUROSPINE 2018).

CME credits and certificate of attendance
CME credits are assigned to participants per half-day. To collect your CME points for your certificate you need to use the scanning stations and SCAN THE BARCODE on your name badge each half-day at the following times:
Morning between 08:00 and 11:00
Afternoon between 13:30 and 16:30

The scanning stations, signposted with “CME Scanning” are located in the registration area (Level 0).

Your certificate will be available for download via a personal link after completing the delegate questionnaire which the organisers will send to you via e-mail on Friday, 21 September 2018.

The scientific programme of EUROSPINE 2018 has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME) as follows:
15 ECMEC for the congress (5 per day for Wednesday, Thursday and Friday)

Pre-day Courses:
An email containing a link to the CME questionnaire will be sent out on Tuesday at 17:00 to each person who attended the pre-day course. Upon completion of the short survey delegates can download their CME Certificate of Attendance.

The EACCME has accredited the Pre-day Courses as follows:
4 European CME credits (ECMEC) for Pre-day Course I, Anterior Approaches to the Thoracic and Lumbar Spine
3 ECMEC for Pre-day Course II, Emerging Technologies in Spine Surgery
3 ECMEC for Pre-day Course III, Spine Tango Users Meeting (STUM)

Congress App
Have the most relevant and up-to-date congress information at hand! Not only does it provide easy access to scientific and logistical congress information (e.g. programme, speakers, sessions, congress venue, etc.), but you will also be able to participate in interactive voting, bookmark your favourite sessions and access the exclusive e-version of “The Spine Times”.
Free WiFi is available within the entire congress venue, except for the meeting rooms on Level M2.
App-Voting: In marked presentations the audience is invited to vote on specific questions via the EUROSPINE App.

Best Podium Award: Will be evaluated within the ‘Best of Show´ and Award papers (Friday, 21 September, 10:30–12:00, Plenary Hall), again with the audiences’ support and rating.

E-posters
A list of all e-posters can be found on the EUROSPINE 2018 website:
http://www.eurospinemeeting.org/scientificprogramme-barcelona2018.htm#
Onsite, e-posters will be accessible during the official congress opening hours in the e-poster area inside the exhibition hall.

EUROSPINE 2018 Debates
There will be two debates with the intention to stimulate thinking and discussions in areas of controversy and to explore areas of consensus. The audience will be asked for their vote on the case management before and after the presentations to see if they could be persuaded to change their views as a result of the arguments presented.

Wednesday, 19 September 2018
10:30 Debate 1: Education – eLearning Moderation: Emre Acaroglu, Ankara, Turkey
11:15 Debate 2: Low Back Pain Moderation: Tamás Fekete, Zurich, Switzerland

EUROSPINE Travel Grants
EUROSPINE aims to offer all colleagues from Europe and beyond the opportunity to attend its annual general meeting, regardless of the individuals’ economic situation. The responsibility for selection remains with the EUROSPINE programme committee.

For EUROSPINE 2018 a total of eight travel grants was awarded to applicants with an accepted abstract in the scientific programme (presentation, QuickFire or e-poster).

Webcasts
As EUROSPINE wants to offer participants as much educational value as possible, presentations in the Plenary Hall will be recorded if the speakers have agreed to it. This enables you to watch presentations again to catch what you have missed. The webcasts will be available online after the congress via the EUROSPINE meetings website www.eurospinemeeting.org.
Scientific Programme

Overview
# Wednesday, 19 September
## Programme Overview

<table>
<thead>
<tr>
<th>Time</th>
<th>Plenary Hall</th>
<th>Room 111</th>
<th>Room 112</th>
<th>Break-out Rooms</th>
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</thead>
<tbody>
<tr>
<td>8:30–10:00</td>
<td>Non-operative Treatment, Medical Economics, New Techniques</td>
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<tr>
<td>10:00–10:30</td>
<td>Coffee Break in the Exhibition Area</td>
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<tr>
<td>10:30–12:00</td>
<td>Debates</td>
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</tr>
<tr>
<td>12:00–14:00</td>
<td>EUROPINE Lunch Symposium 2</td>
<td>EUROPINE Lunch Symposium 1</td>
<td>Industry Lunch Workshops Concurrent Sessions in Break-out Rooms</td>
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<tr>
<td></td>
<td>Surgical Management of Spinal Disorders in Patients with Parkinson’s Disease</td>
<td>Surgical Management of Cervical and Thoracolumbar Osteotomies</td>
<td>Lunch Workshops Concurrent Sessions in Break-out Rooms</td>
<td></td>
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<tr>
<td>14:00–15:20</td>
<td>QuickFires</td>
<td>QuickFires</td>
<td>QuickFires</td>
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<tr>
<td></td>
<td>Adult Deformity / Growing Spine</td>
<td>Basic Science, Infection, Complication</td>
<td>Degenerative Spine, Non-Operative Techniques</td>
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<tr>
<td>15:20–15:50</td>
<td>Coffee Break in the Exhibition Area</td>
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<tr>
<td>15:50–17:30</td>
<td>Degenerative Cervical Spine, Tumor</td>
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<tr>
<td>17:30–18:30</td>
<td>WELCOME RECEPTION (Exhibition Area &amp; Entrance Foyer)</td>
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# Thursday, 20 September

## Programme Overview

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<th>Time</th>
<th>Room 111</th>
<th>Room 112</th>
<th>Break-out Rooms</th>
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<tbody>
<tr>
<td>8:30–10:00</td>
<td>Degenerative Thoracolumbar Spine</td>
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<td>p. 32</td>
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<tr>
<td>10:00–10:30</td>
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<td></td>
<td>Coffee Break in the Exhibition Area</td>
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<tr>
<td>10:30–12:00</td>
<td>Presidential Address and Medal Lecture</td>
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<td>p. 33</td>
<td></td>
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<tr>
<td>12:00–14:00</td>
<td>EUROPINE Lunch Symposium 4</td>
<td>EUROPINE Lunch Symposium 3</td>
<td>Industry Lunch Workshops</td>
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<tr>
<td></td>
<td>Refining your Osteotomy Technique</td>
<td>Adolescent Spinal Deformities and Treatment Options</td>
<td>Concurrent Sessions in Break-out Rooms</td>
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<tr>
<td></td>
<td>p. 35</td>
<td>p. 34</td>
<td>p. 65</td>
</tr>
<tr>
<td>14:00–15:20</td>
<td>Growing Spine, Minimally Invasive Spine Surgery</td>
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<td>p. 35</td>
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<tr>
<td>15:20–15:50</td>
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<td></td>
<td>Coffee Break in the Exhibition Area</td>
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<tr>
<td>15:50–17:05</td>
<td>Adult Deformity, Epidemiology</td>
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<td>p. 37</td>
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<tr>
<td>17:10</td>
<td>EUROPINE New Member Cocktail and General Assembly (for members only)</td>
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<tr>
<td>20:00</td>
<td>OFFICIAL CONGRESS EVENING, Café del Mar – at own expense</td>
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# Friday, 21 September

## Programme Overview

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>8:30–10:00</td>
<td><strong>Plenary Hall / Room 111 / Room 112 / Break-out Rooms</strong></td>
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<td></td>
<td><strong>8:30–10:00</strong></td>
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<tr>
<td></td>
<td><strong>Trauma, Diagnostics and Imaging</strong></td>
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<td></td>
<td><strong>p. 40</strong></td>
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<tr>
<td>10:00–10:30</td>
<td><strong>Coffee Break in the Exhibition Area</strong></td>
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<tr>
<td>10:30–12:00</td>
<td><strong>The ‘Best of Show’ and Award papers</strong></td>
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<td></td>
<td><strong>p. 41</strong></td>
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<tr>
<td>12:00–14:00</td>
<td><strong>EUROSPINE Lunch Symposium 5</strong></td>
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<tr>
<td></td>
<td><strong>Aging Spine – How to Achieve Optimal Results?</strong></td>
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<td></td>
<td><strong>p. 43</strong></td>
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<tr>
<td>12:00–14:00</td>
<td><strong>EUROSPINE Lunch Symposium 7</strong></td>
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<tr>
<td></td>
<td><strong>The Role of Spine Registries Today (Spine Tango)</strong></td>
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<td><strong>p. 44</strong></td>
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<tr>
<td>12:00–14:00</td>
<td><strong>EUROSPINE Lunch Symposium 6</strong></td>
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<tr>
<td></td>
<td><strong>Spondylolysis / Spondylolisthesis</strong></td>
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<td></td>
<td><strong>p. 43</strong></td>
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<tr>
<td>14:00–15:20</td>
<td><strong>QuickFires</strong></td>
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<tr>
<td></td>
<td><strong>New Techniques and Minimally Invasive Spine Surgery</strong></td>
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<td></td>
<td><strong>p. 44</strong></td>
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<tr>
<td>14:00–15:20</td>
<td><strong>QuickFires</strong></td>
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<tr>
<td></td>
<td><strong>Trauma, Diagnostics and Imaging, Epidemiology</strong></td>
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<td><strong>p. 46</strong></td>
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<tr>
<td>14:00–15:20</td>
<td><strong>QuickFires</strong></td>
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<tr>
<td></td>
<td><strong>Degenerative Cervical Spine, Tumor, Patient Safety</strong></td>
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<td><strong>p. 48</strong></td>
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<tr>
<td>15:20–15:50</td>
<td><strong>Coffee Break in the foyer on Level 1</strong></td>
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<tr>
<td>15:50–17:00</td>
<td><strong>Complications, Infection, Epidemiology</strong></td>
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<td><strong>p. 50</strong></td>
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<tr>
<td>17:00</td>
<td><strong>Adjourn - End</strong></td>
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Pre-day Course Programme
Tuesday, 18 September

13:00-17:45  PRE-DAY COURSE I
Anterior Approaches to the Thoracic and Lumbar Spine
Room 112
Chairs: Pedro Berjano, Milan, Italy and Hossein Mehdian, London, UK

13:00  Welcome & Course Objectives
Pedro Berjano, Milan, Italy and Hossein Mehdian, London, UK

13:05–14:30  Cervical Spine
13:05–13:15  Transnasal endoscopic approach to C0–C2
Francesco Zenga, Torino, Italy
13:17–13:27  Transoral approaches to C0–C2
Dezsö J. Jeszenszky, Zurich, Switzerland
Heiko Koller, Fuerth, Germany
13:39–13:54  Q & A – Discussion Session
13:55–14:05  One step beyond in anterior approaches to C2–C7
Luca Papavero, Hamburg, Germany
14:07–14:17  Anterior approaches to the cervicothoracic junction (sternotomy, manubriotomy)
Patrick Tropiano, Marseilles, France
14:17–14:32  Q & A – Discussion Session
14:32–14:45  COFFEE BREAK
14:45–15:45  Hands-on Demonstration section (parallel rotations in groups)
4–5 Consecutive hand-on demonstrations by Faculty and Medical Technology Experts
(for details, please visit http://www.eurospinemeeting.org/pre-day-courses2018)

15:45–17:17  Thoracolumbar spine
15:45–15:55  Anterior approaches to the thoracic spine
Ciaran Bolger, Dublin, Ireland
15:57–16:07  Thoracoabdominal approaches
Hossein Mehdian, London, UK
16:09–16:19  □ MIS approach for thoracolumbar and lumbar corpectomy  
Pedro Berjano, Milan, Italy

16:19–16:40  □ Q & A – Discussion Session

16:40–16:50  □ MIS Transpsoas lumbar approach  
Michael Breitenfelder, Ludwigshafen, Germany

16:52–17:02  □ MIS Ante-psoas lumbar approach  
Gerd Bordon, Valencia, Spain

17:04–17:14  □ Transperitoneal and retroperitoneal anterior approach to L3–S1  
Dick J. Zeilstra, Zwolle, Netherlands

17:16–17:26  □ L5–S1 ALIF in the lateral position  
Richard Assaker, Lille, France

17:26–17:40  □ Q & A – Discussion Session

17:40–17:45  □ Adjourn

13:00-17:00  □ PRE-DAY COURSE II
Emerging Technologies in Spine Surgery
Room 111
Chairs: Doniel Drazin, Kirkland, USA and J. Patrick Johnson, Los Angeles, USA

13:00  □ Welcome, Introductions, Course Overview  
Doniel Drazin, Kirkland, USA and J. Patrick Johnson, Los Angeles, USA

13:05–14:30  □ Emerging Technologies: Navigation – pros vs cons

Bernhard Meyer, Munich, Germany

Claudius Thomé, Innsbruck, Austria

13:35–13:50  □ Introducing the Role of Spinal Navigation in Clinical Practice  
Peter Vajkoczy, Berlin, Germany

13:50–14:05  □ Navigating the Cervical Spine: Pearls and pitfalls  
Ehab Shiban, Munich, Germany
### Scientific Programme Tuesday, 18 September

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>14:05–14:20</td>
<td>Panel discussion of the disasters with navigation</td>
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<td>Panel Leader: J. Patrick Johnson, Los Angeles, USA</td>
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<td>Panelists: All</td>
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<tr>
<td>14:20–15:10</td>
<td>Emerging Technologies: Robotics/System Integration/Simulators</td>
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<tr>
<td>14:20–14:35</td>
<td>The past, present and future of robotics in spine surgery</td>
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<td></td>
<td>Veit Rhode, Goettingen, Germany</td>
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<tr>
<td>14:35–14:50</td>
<td>Robotics in spine surgery: an update</td>
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<td>Enrico Tessitore, Geneva, Switzerland</td>
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<tr>
<td>14:50–15:05</td>
<td>Review of Spine Simulators and Mobile Device Applications</td>
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<td>Avelino Parajon, Madrid, Spain</td>
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<tr>
<td>15:05–15:10</td>
<td>Q &amp; A – Discussion Session</td>
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<tr>
<td>15:10–15:30</td>
<td>COFFEE BREAK</td>
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<tr>
<td>15:30–16:55</td>
<td>Hands-on Demonstration section: MIS Navigation/Robotics/Microscopes</td>
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<td>5–7 Consecutive hand-on demonstrations by Faculty and Medical Technology Experts</td>
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<td>Objectives: • Illustration, appropriateness and application of the different systems</td>
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<td>• Indication of benefits and use of the involved systems</td>
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<td>• Demonstration of step-by-step pearls using the different systems</td>
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<tr>
<td>16:55–17:00</td>
<td>Closing remarks</td>
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<tr>
<td></td>
<td>Doniel Drazin, Kirkland, USA</td>
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For details, please visit [http://www.eurospinemeeting.org/pre-day-courses2018](http://www.eurospinemeeting.org/pre-day-courses2018)

### PRE-DAY COURSE III

**Spine Tango Users Meeting (STUM)**

Room 118+119

Chairs: Anne Mannion and Emin Aghayev, Zurich, Switzerland

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>13:00–17:00</td>
<td>Introduction</td>
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<tr>
<td></td>
<td>Emin Aghayev, Zurich, Switzerland</td>
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<tr>
<td>13:00–13:35</td>
<td>Look back on 2017/2018 and forward 2019</td>
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<td>Thomas Zweig, Bern, Switzerland and Ehab Shiban, Munich, Germany</td>
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<tr>
<td>13:35–14:05</td>
<td>Registries – building a data backbone: Lesson from the US</td>
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<tr>
<td></td>
<td>Justine Norwitz, Seattle, USA</td>
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</tbody>
</table>
Can the European Spine Societies Advisory Board (EuSSAB) be a collaboration platform for Spine Tango? 
Andrea Luca, Milan, Italy

COHERE, a large multinational HIV cohort: Achievements and lessons learned
(Keynote speaker)
Stéphane De Wit, Brussels, Belgium

COFFEE BREAK

Perspective of a conservative therapist
Samuel Morris, Nottingham, UK

Perspective of an interventional therapist
Thomas Zweig, Bern, Switzerland

Shaping conservative spinal services with the Registry
Samuel Morris, Nottingham, UK

Variation in selection criteria and approaches to surgery for lumbar spinal stenosis among patients treated in Boston and Norway
Greger Lønne, Lillehammer, Norway

Lumbar spinal stenosis: Comparison of surgical practice variation and clinical outcome in three national spine registries
Greger Lønne, Lillehammer, Norway

A novel use of the Spine Tango registry to evaluate selection bias in patient recruitment into clinical studies: an analysis of patients participating in the Lumbar Spinal Stenosis Outcome Study (LSOS)
Hans-Jürgen Becker, Zurich, Switzerland

What could we do better to foster collective evidence generation on spinal treatments?
Emin Aghayev, Zurich, Switzerland

What should we do better to foster collective evidence generation on spinal treatment
Moderator: Anne F. Mannion

Review of the day and closing words
Anne F. Mannion, Zurich, Switzerland
Scientific Programme
Wednesday, 19 September
### Wednesday, 19 September

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<th>Time</th>
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<td>08:30</td>
<td>Opening</td>
<td>Plenary Hall</td>
<td>Local Hosts: Luis Alvarez Galovich, Ferran Pellisé, Juan Bago</td>
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<td>08:33</td>
<td>Welcome Address</td>
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<td>EUROSPINE President: Frank Kandziora, Frankfurt, Germany</td>
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<td>08:36</td>
<td>Introduction to the Scientific Programme</td>
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<td>The blinded peer review process of the Programme Committee Stavros Stavridis, Thessaloniki, Greece, Chair Programme Committee 2018</td>
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<td>08:40–10:00</td>
<td>Non-operative Treatment, Medical Economics, New Techniques</td>
<td>Plenary Hall</td>
<td>Chairs: Frank Kandziora, Frankfurt, Germany Stavros Stavridis, Thessaloniki, Greece</td>
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**1** QUALITY, SAFETY, AND VALUE OF INNOVATION IN SCOLIOSIS SURGERY: INTRAOPERATIVE SKULL FEMORAL TRACTION AND NAVIGATED SEQUENTIAL DRILLING
Alejandro Peiro-Garcia, Jonathan Bourget-Murray, Garielle Brown, Madalene Earp, David Parsons, Fabio Ferri-de-Barros
Department of Surgery, Division of Pediatric Orthopaedic Surgery; Alberta Children’s Hospital, University of Calgary, Canada

**2** PREOPERATIVE PREDICTION OF COST AND CATASTROPHIC COST (CC) IN ADULT SPINE DEFORMITY (ASD) SURGERY: FEASIBILITY ANALYSIS OF PREDICTIVE ANALYTICS TO ESTABLISH 90 DAY BUNDLED PAYMENTS
Vall d’Hebron Institut of Research (VHIR), Barcelona, Spain

**3** WILL COST TRANSPARENCY IN THE OPERATING THEATRE CAUSE SURGEONS TO CHANGE THEIR PRACTICE
Andrew Glennie, Sean Barry, Jacob Alant, Bill Oxner, Sean Christie
Department of Surgery, Dalhousie University, Halifax, Nova Scotia, Canada

**4** A DUAL SCREW TECHNIQUE FOR VERTEBRAL COMPRESSION FRACTURES USING ROBOTIC NAVIGATION IN THE OSTEOPENIC LUMBAR SPINE: AN IN-VITRO BIOMECHANICAL ANALYSIS
Michael Steinmetz, Jessica Riggleman, Jonathan Harris, John Butler, Chelsea Wright, Mir Hussain, Bryan Ferrick, Brandon Bucklen
Department of Neurosurgery, Cleveland Clinic Lerner College of Medicine, Ohio, USA; Musculoskeletal Education and Research Center, A Division of Globus Medical Inc., Audubon,
Pennsylvania, USA; School of Medicine, Case Western Reserve University, Cleveland, Ohio, USA; School of Biomedical Engineering, Science and Health Systems, Drexel University, Philadelphia, Pennsylvania, USA

5 INCREASED RADIATION BUT NO BENEFITS IN PEDICLE SCREW ACCURACY USING INTRAOPERATIVE CT BASED NAVIGATION COMPARED TO FREE HAND TECHNIQUE IN IDIOPATHIC SCOLIOSIS SURGERY
Witko Urbanski
Dept of Orthopaedic Surgery and Traumatology, University Hospital Wroclaw, Poland

6 PEDICLE SCREW PLACEMENT WITH AUGMENTED REALITY SURGICAL NAVIGATION USING INTRAOPERATIVE 3D IMAGING
Adrian Elmi-Terander, Erik Edstrom, Kyrre Pedersen, Halldor Skulason, Gustav Burström, Anastasios Charalampidis, Frederik Stahl, Michael Fagerlund, Michael Soderman, Paul Gerdhem
Karolinska University Hospital, Dept of Neurosurgery, Stockholm, Sweden

7 KINESIOTAPING IN THE TREATMENT OF CHRONIC MECHANICAL LOW BACK PAIN: A RANDOMIZED CLINICAL TRIAL
Lourdes Peñalver, Julio Domenech, Julia Schmitt, Javier Ballester, Alejandro Alvarez-Llanas, Juan Francisco Lison
Dept of Orthopedic Surgery and Rehabilitation, Valencia, Spain

8 COGNITIVE BEHAVIOURAL THERAPY SUPPORTED WITH INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE TREATMENT OF CHRONIC LOW BACK PAIN: A RANDOMIZED CLINICAL TRIAL
Julio Domenech, Lourdes Peñalver, Eva Del Rio, Azucena Garcia-Palacios, Rocio Herrero, Aida Ezzedine, Cristina Botella, Julia Schmitt, Alejandro Alvarez-Llanas, Rosa Baños
Dept of Orthopedic Surgery, Valencia, Spain

9 SPINE SURGERY IN PATIENTS WITH LONG-TERM ORAL ANTICOAGULATION: A PROPENSITY SCORE MATCHED COHORT STUDY
Romy Sweda, Anne F Mannion, David O’Riordan, Daniel Haschtmann, Dezső Jeszenszky, Tamás Fekete
Spine Center, Schulthess Klinik, Zurich, Switzerland; Medical University of Vienna, Vienna, Austria; Department of Cardiology, Bern University Hospital and University of Bern, Bern, Switzerland

10:00–10:30 COFFEE BREAK IN THE EXHIBITION AREA

10:30–12:00 Debates

10:30 Debate 1: eLearning, is it the future of spinal surgery education?
Moderation: Emre Acaroglu, Ankara, Turkey
Pro Bernhard Meyer, Munich, Germany
Against Paulo Pereira, Porto, Portugal
11:15  Debate 2: Low Back Pain: How specific can it ever be?
Moderation: Tamás Fekete, Zurich, Switzerland

Most Low Back Pain is non-specific (and should not be treated surgically)
Wilco Peul, Leiden & the Hague, Netherlands

Most Low Back Pain is specific (and can be treated successfully with surgery)
Tim Germon, Plymouth, UK

12:00–14:00  EUROSPINE LUNCH SYMPOSIA

12:00–14:00  EUROSPINE LUNCH SYMPOSIUM 1
Room 112
Cervical and Thoracolumbar Osteotomies
Learning from the Experts. Surgical Video Session in cooperation with OOT
Chairs: Hossein Mehdian, London, UK
Klaus Schnake, Fuerth, Germany

Cervical Osteotomy: Preoperative Planning and Surgical Technique
Hossein Mehdian, London, UK

Discussion

Ponte osteotomies in the thoracic spine: Indications & Technique
Claudio Lamartina, Milan, Italy

Discussion

Thoracic hemivertebra resection for treatment of congenital scoliosis
Ibrahim Obeid, Bordeaux, France

Discussion

Pedicle subtraction osteotomy for the treatment of post-traumatic kyphosis
Klaus Schnake, Nurnberg, Germany

Discussion

Panel Discussion – Questions and Answers

12:00–14:00  EUROSPINE LUNCH SYMPOSIUM 2
Room 111
Surgical Management of Spinal Disorders in Patients with Parkinson’s Disease
Chairs: José Cavanilles Walker, Barcelona, Spain
Sleiman Haddad, Barcelona, Spain

What a spine surgeon should know about Parkinson’s disease?
Dolores Vilas, Barcelona, Spain

Discussion
Spine pathologies in patients with Parkinson disease
*JM Cavanilles-Walker, Barcelona, Spain*

Discussion

Drop head Syndrome, is the neck deformity driver or compensatory?
*Sleiman Haddad, Barcelona, Spain*

Discussion

Challenges in Surgical treatment of Spinal disorders in Parkinson’s disease
*Ibrahim Obeid, Bordeaux, France*

Discussion

### 14:00–15:20

**CONCURRENT SESSIONS**

QuickFires – Short Communications

#### 14:00

**Adult Deformity / Growing Spine**

Plenary Hall

Chairs: *Dominique Rothenfluh, Oxford, UK*
*Enrico Tessitore, Geneva, Switzerland*

**QF1** COMPENSATORY MECHANISMS OF LOWER LIMB IN ADULT SPINAL DEFORMITY – IS THE ANKLE DORSIFLEXED OR PLANTER-FLEXED?
*Mitsuru Takemoto, Takayoshi Shimizu*

Dept of Orthopaedic and Spine Surgery, Kyoto City Hospital, Kyoto, Japan

**QF2** GAIT ASSESSMENT IS IMPORTANT FOR POSTOPERATIVE EVALUATION OF CORRECTIVE FUSION FOR ADULT SPINAL DEFORMITY: A 2-YEAR FOLLOW-UP
*Hideyuki Arima, Yu Yamato, Tomohiko Hasegawa, Daisuke Togawa, Go Yoshida, Tomohiro Banno, Shin Oe, Yuki Mihara, Hiroki Ushirazako, Yukihiro Matsuyama*

Dept of Orthopedic Surgery, Hamamatsu, Japan

**QF3** APPROPRIATE RESTORATION OF THE INDIVIDUALIZED SAGITTAL PLANE (GAP SCORE) AND PRESENCE OF SACROILIAC FIXATION INDEPENDENTLY DETERMINE MECHANICAL COMPLICATIONS AFTER 3-COLUMN OSTEOTOMIES
*Caglar Yilgor, Suna Lahut, Yasemin Yavuz, kadir abul, Can Berk Asaroglu, Ibrahim Obeid, Frank S. Kleinstueck, Francisco Javier Sanchez Perez-Grueso, Emre Acaroglu, Ferran Pellise, Ahmet Alanay, European Spine Study Group*

Department of Orthopedics and Traumatology, Acibadem Mehmet Ali Aydinlar University, Istanbul, Turkey; Comprehensive Spine Center, Acibadem Maslak Hospital, Istanbul, Turkey; Department of Biostatistics, Ankara University, Ankara, Turkey

**QF4** IMPACT OF ADULT SCOLIOSIS ON THE TYPE OF SAGITTAL PROFILE
*Javier Pizones, Montserrat Baldan-Martín, Francisco Javier Pérez-Grueso, Caglar Yilgor, Alba Vila-Casademunt, Ibrahim Obeid, Ahmet Alanay, Frank Kleinstück, Emre Acaroglu, Ferran Pellisé*

Dept Orthopaedic Surgery, Spine Unit. Hospital Universitario La Paz, Madrid, Spain
QF5  THE STRATEGY OF TREATMENT SEVER ADULT SPINAL DEFORMITY (SASD) WITH RESPIRATORY FAILURE
Zhiyue Shi, Jingming Xie, Yingsong Wang, Ying Zhang, Ni Bi, Tao Li, Zhi Zhao
Department of Orthopedics, The 2nd Affiliated Hospital of Kunming Medical University, Yunnan Province, P. R. CHINA

QF6  SURGICAL VERSUS NON-OPERATIVE TREATMENT OF ADULT SPINAL DEFORMITY: A SYSTEMATIC REVIEW AND META-ANALYSIS
Dominique A. Rothenfluh, Marco Germann, David Kieser
University of Oxford, Oxford, UK

QF7  DEVELOPMENT OF DEPLOYABLE PREDICTIVE MODELS FOR MCID OF 2 YEAR OUTCOMES ACROSS ALL COMMONLY USED HRQOL INSTRUMENTS IN ADULT SPINAL DEFORMITY SURGERY: RESULTS IN 570 PATIENTS FROM 17 HOSPITAL
Vall d’Hebron Institute of Research (VHIR), Barcelona, Spain

QF8  SUCCESSFUL CREATION OF DEPLOYABLE PREOPERATIVE PREDICTIVE RISK CALCULATORS FOR INDIVIDUAL PATIENT EVENT-FREE SURVIVORSHIP FOR MAJOR COMPLICATIONS, HOSPITAL READMISSIONS AND UNPLANNED SURGERY FOLLOWING ADULT SPINAL DEFORMITY (ASD) SURGERY
Vall d’Hebron Institute of Research (VHIR), Barcelona, Spain

QF9  WOULD SCREW-BASED LONG INSTRUMENTATION WITH S2AI LIMIT THE IMPROVEMENT OF HRQOL?
ChangChun Tseng, Zhen Liu, ZhiHui Zhao, Jie Li, Bin Wang, Yang Yu, Yong Qiu, ZeZhang Zhu
Spine Surgery Drum Tower Hospital of Nangjing University Medical School, Nangjing 210008, China

QF10  RADIOGRAPHIC OUTCOME AND COMPLICATIONS AFTER SINGLE-LEVEL LUMBAR EXTENDED PEDICLE SUBTRACTION OSTEOTOMY FOR FIXED GLOBAL SAGITTAL MALALIGNMENT: A RETROSPECTIVE ANALYSIS OF 55 ADULT SPINAL DEFORMITY PATIENTS WITH MINIMUM 2-YEAR FOLLOW-UP
Thomas Buell, James Nguyen, Marcus Mazur, Jeffrey Mullin, Juanita Garces, Davis Taylo, Chun-Po Yen, Mark Shaffrey, Christopher Shaffrey, Justin Smith
Department of Neurosurgery, University of Virginia Health System, Charlottesville, Virginia, USA

QF11  EFFECT OF SATELLITE RODS CONSTRUCTION TO PREVENT ROD FRACTURES FOLLOWING 3-COLUMN OSTEOTOMY IN PATIENTS WITH ADULT SPINAL DEFORMITY
Yu Yamato, Tomohiko Hasegawa, Daisuke Togawa, Go Yoshida, Tomohiro Banno, Hideyuki Arima, Shin Oe, Yuki Mihara, Hiroki Ushirozako, Yukihiro Matsuyama
Dept of Orthopaedic Surgery, Hamamatsu University School of Medicine, Hamamatsu, Japan
QF12  ISYQOL DISCRIMINATES ADOLESCENTS WITH SPINAL DEFORMITIES SUBGROUPS BETTER THAN THE SRS-22 QUESTIONNAIRE
Fabio Zaina, Antonio Caronni, Sabrina Donzelli, Luciana Sciumè, Francesca Di Felice, Stefano Negri
ISICO (Italian Scientific Spine Institute), Milan, Italy; Università degli Studi di Milano, Residency Program in Physical and Rehabilitation Medicine, Milan, Italy; Department of Neurorehabilitation Sciences, Casa di Cura del Policlinico, Milano, Italy; Department of Clinical and Experimental Sciences, University of Brescia, Italy; IRCCS Fondazione Don Gnocchi, Milan, Italy

QF13  OUTCOMES OF SYNDROMIC SCOLIOSIS PATIENTS TREATED WITH MAGNETICALLY CONTROLLED GROWTH RODS
Shahnawaz Haleem, David Kieser, Dan Mardare, Chrishan Thakar, Colin Nnadi
Spinal Unit, Oxford University Hospitals, Oxford, UK

QF14  CLINICAL AND RADIOLOGIC OUTCOMES OF POSTERIOR ONLY HEMIVERTEBRA RESECTION AND SHORT SEGMENT FUSION WITH PEDICLE SCREW FIXATION IN CHILDREN YOUNGER THAN 5 YEARS: MINIMUM 10 YEARS FOLLOW-UP
Meric Enercan, Yunus Akman, Isik Karalok, Emel Kaya, Cem Sever, Yesim Erol, Tunay Sanli, Sinan Kahraman, Selhan Karadereler, Azmi Hamzaoglu
Istanbul Spine Center, Turkey

QF15  SPINAL GROWTH TETHERING AROUND THE APICAL VERTEBRAE LEADS TO ASYMMETRIC GROWTH AS A MECHANISM OF SPINAL DEFORMITY CORRECTION IN KYPHOSIS AND SCOLIOSIS
Alaaeldin Ahmad, Loai Aker, Ahmad Ghanem
Orthopedic, West Bank, Palestine

14:00  Basic Science, Infection, Complication
Room 111
Chairs: Werner Schmoelz, Innsbruck, Austria
Cornelia Neidlinger-Wilke, Ulm, Germany

QF16  HUMAN WHARTON’S JELLY CELLS ACTIVATE DEGENERATIVE NUCLEUS PULPOSUS CELLS IN VITRO
Zhihua Han, Yan Zhang, Liang Gao, Dike Ruan
Department of Orthopaedic Surgery, Navy General Hospital of PLA, Beijing, China

QF17  IDENTIFYING THE LINK BETWEEN TRP CHANNELS AND LOW BACK PAIN
Karin Wuertz-Kozak, Aleksandra Sadowska, Ermioni Touli, Wolfgang Hitzl, Oliver N. Hausmann
Institute for Biomechanics, ETH, Zurich, Switzerland

QF18  3’-UTR POLYMORPHISMS OF MTHFR AND TS ASSOCIATED WITH OSTEOPOROTIC VERTEBRAL COMPRESSION FRACTURE SUSCEPTIBILITY IN POSTMENOPAUSAL WOMEN
Tae-Keun Ahn, In-Bo Han
Dept of Orthopedic Surgery, CHA university, Seongnam, Korea
QF19 THE EFFECT OF QUASI-PHYSIOLOGICAL LOADING ON THE INTERSEGMENTAL COUPLED MOTION BEHAVIOUR OF THE HUMAN THORACIC SPINE: AN IN VITRO STUDY USING ENTIRE RIB CAGE SPECIMENS
Christian Liebsch, Hans-Joachim Wilke
Institute of Orthopaedic Research and Biomechanics, Ulm, Germany

QF20 THE THREE-DIMENSIONAL DEFORMITY IN AIS DEPENDS ON THE TYPE OF CURVATURE
Ayman Assi, Mohammad Karam, Wafa Skalli, Claudio Vergari, Ziad Bakouny, Jeoffrey Otayek, Aren Joe Bizdikian, Fares Yared, Nour Khalil, Khalil Kharrat, Ismat Ghanem
Faculty of Medicine, University of Saint-Joseph, Beirut

QF21 BIOMECHANICAL ANALYSIS OF A NOVEL CF/PEEK VERTEBRAL BODY REPLACEMENT IN COMBINATION WITH A SCREW AND ROD SYSTEM (CF/PEEK VS. TITANIUM)
Daniel Adler, Schmuelz Werner, Spicher Anna, Stephanie Goerke, Michael Akbar
Spine Center, Department of Orthopaedic Surgery, Trauma Surgery and Division of Spinal Cord Injury, Ruprecht-Karls-University Heidelberg, Germany

QF22 INTRA-WOUND APPLICATION OF VANCOMYCIN POWDER MAY INCREASE GR (-) WOUND INFECTIONS: A CASE-CONTROL STUDY
Emre Acaroglu, Prashant Adhikari, Vugar Nabi Nabiyev, Selim Ayhan, Selcuk Yuskel, Selcuk Palaoglu
1Ankara Spine Center, Ankara, Turkey; 2Fellow spine surgeon, ARTES Spine Center at Acibadem Ankara Hospital, Ankara, Turkey; 3Department of Orthopaedics and Traumatology, ARTES Spine Center at Acibadem Ankara Hospital, Ankara, Turkey; 4Department of Neurological Surgery, ARTES Spine Center at Acibadem Ankara Hospital, Ankara, Turkey; 5Department of Biostatistics, Yildirim Beyazit University, Ankara, Turkey; 6Department of Neurological Surgery, ARTES Spine Center at Acibadem Ankara Hospital, Ankara, Turkey

QF23 VANCOMYCIN POWDER MIXED WITH AUTOGENOUS BONE GRAFT AND BONE SUBSTITUTE MAY DECREASE THE RISK OF DEEP SURGICAL SITE INFECTION IN DEGENERATIVE LUMBAR SPINES FUSION SURGERY – AN AMBISPECTIVE STUDY
Po-Hsin Chou, Yu-Cheng Yao, presented by Shih-Tien Wang
Department of Orthopedic Surgery, School of Medicine, National Yang Ming University; Department of Orthopedic and Traumatology, Taipei Veterans General Hospital, Taipei, Taiwan

QF24 LYMPHOCYTE COUNT AT 4 DAYS POSTOPERATIVELY AND CRP LEVEL AT 7 DAYS POSTOPERATIVELY: RELIABLE AND USEFUL MARKERS FOR SURGICAL SITE INFECTION FOLLOWING INSTRUMENTED SPINAL FUSION
Eiichiro Iwata, Yusuke Yamamoto, Hideki Shigematsu, Hiroshi Nakajima, Masato Tanaka, Akinori Okuda, Yasuhito Tanaka
Nara City Hospital, Narashi, Japan

QF25 WHICH PARAMETERS OTHER THAN AND IN ADDITION TO NEUROLOGICAL STATUS ARE RELEVANT ON SURGICAL DECISION MAKING IN SPINAL TUBERCULOSIS?
Emre Acaroglu, Prashant Adhikari, Selcuk Yuskel, Selim Ayhan, Bigyan Bhandari, Binod Bijukachhe
1Ankara Spine Center, Ankara, Turkey; 2Fellow Spine Surgeon, ARTES Spine Center, Ankara, Turkey & Consultant, Orthopedic & Spine Surgeon, Grande International Hospital, Kathmandu,
QF26 INDICATORS FOR NON-ROUTINE DISCHARGE FOLLOWING CERVICAL DEFORMITY-CORRECTIVE SURGERY: RADIOGRAPHIC, SURGICAL, AND PATIENT-RELATED PREDICTORS
NYU Langone Orthopaedic Hospital, Dept of Orthopaedic Surgery, New York, USA; Hospital for Special Surgery, Dept of Orthopaedic Surgery, New York, USA; Department of Neurosurgery, University of Virginia Medical Center, Charlottesville, USA; San Diego Center for Spinal Disorders, La Jolla, USA; Department of Orthopaedic Surgery, Johns Hopkins University School of Medicine, Baltimore, USA; Department of Orthopaedic Surgery, Washington University, St. Louis, USA; Department of Orthopaedic Surgery, University of Calgary, Calgary, Canada; Department of Orthopaedic Surgery, University of California, Davis, Davis, USA; Department of Orthopaedic Surgery, University of Kansas Medical Center, Kansas City, USA; Department of Orthopaedic Surgery, Swedish Neuroscience Institute, Seattle, USA; Rocky Mountain Scoliosis and Spine, Denver, USA

QF27 SIGNIFICANT DIFFERENCES IN MORBIDITY WHEN COMPARING ADVERSE EVENTS FOR CERVICAL AND LUMBAR SPINE SURGERY – PROSPECTIVELY GRADED WITH SAVES
Stian Solumsmoen, Rachid Bech-Azeddine
Dept. of Spine Surgery, Rigshospitalet-Glostrup, Copenhagen, Denmark

QF28 ANY VERTEBRAL SEGMENT MAY BE CHOSEN AS UPPER-INSTRUMENTED VERTEBRA IF IDEAL INDIVIDUALIZED SAGITTAL SHAPE AND ALIGNMENT IS REACHED
1Department of Orthopedics and Traumatology, Acibadem Mehmet Ali Aydinlar University, Istanbul, Turkey; 2Comprehensive Spine Center, Acibadem Maslak Hospital, Istanbul, Turkey; 3Department of Biostatistics, Ankara University, Ankara, Turkey; 4Spine Surgery Unit, Bordeaux University Hospital, Bordeaux, France; 5Spine Surgery Unit, Hospital Universitari Vall d’Hebron, Barcelona, Spain; 6Spine Center Division, Department of Orthopedics and Neurosurgery, Schullersh Klinik, Zurich, Switzerland; 7Spine Surgery Unit, Hospital Universitario La Paz, Madrid, Spain; 8Ankara ARTES Spine Center, Ankara, Turkey; 9Vall Hebron Institute of Research (VHIR), Barcelona, Spain

QF29 IMETABOLISM OF THE INTERVERTEBRAL DISC CELLS UNDER THE INFLUENCE OF INFLAMMATORY FACTORS
Liudmila Bardonova, Evgenii Belykh, Vadim Byvaltsev, Mark Preul, Morgan Giers
1Irkutsk State Medical University, Irkutsk, Russia; 2Barrow Neurological Institute, Phoenix, USA; 3Oregon State University, Corvallis, USA
QF30 UROGENITAL DYSFUNCTION AFTER CAUDA-EQUINA SYNDROME: A PROSPECTIVE LONG-TERM STUDY OF SPHINCTER AND SEXUAL FUNCTION
Adam Devany, Robert Crawford, Lennel Lutchman, Ruth Doherty, Nick Steele
Norfolk and Norwich University Hospitals, Norwich, UK

14:00 Degenerative Spine, Non-Operative Techniques
Room 112
Chairs: Aron Lazary, Budapest, Hungary
Elias Papadopoulos, Athens, Greece

QF31 PROSPECTIVE COMPARISON OF THE THERAPEUTIC VALUE OF PERIRADICULAR AND FACET JOINT INFILTRATIONS
Chris Lindemann, Felix Hochberger, Timo Zippelius, Alexander Hölzl, Patrick Strube
Dept of Spine Surgery, Eisenberg, Germany

QF32 TOWARD A SURGICAL BABEL: A 4-NATION SURVEY ON VARIATIONS IN SURGICAL INDICATION FOR DEGENERATIVE SPINAL DISORDERS
Bertrand Debono, Luis Alvarez Galovich, Olivier Hamel, Guillaume Lonjon, Florian Ringel
Dept of Neurosurgery, Capio-Clinique des Cèdres, Cornebarrieu, France

QF33 GENDER- AND AGE-SPECIFIC ANALGESIA FOR EARLY POSTOPERATIVE PAIN MANAGEMENT AFTER LUMBAR DECOMPRESSIVE SURGERY: A RANDOMIZED CLINICAL TRIAL
In-Soo Oh, Kee-Yong Ha, Young-Yul Kim, Sang-Il Kim
Dept of Orthopedic surgery, Incheon, Korea

QF34 THE RELATIONSHIP BETWEEN COMPENSATORY MECHANISMS OF RESIDUAL KYPHOTIC DEFORMITY AFTER OSTEOPOROTIC VERTEBRAL FRACTURES AND HEALTH-RELATED QUALITY OF LIFE
Keishi Maruo, Toshiya Tachibana, Fumihiro Arizumi, Kazuki Kushuyama, Kishima Kazuya, Shinichi Yoshiya
Dept of Orthopaedic Surgery, Nishinomiya, Japan

QF35 DELAYED PERCUTANEOUS VERTEBROPLASTY IS OF CLINICAL BENEFIT IN THE MANAGEMENT OF OSTEOPOROTIC VERTEBRAL COMPRESSION FRACTURES
Rory Morrison, Helen Vint, Cyrus Jensen, Paul Sanderson
1-4Department of Orthopaedic Spinal Surgery, Newcastle Hospitals NHS Foundation Trust, RoyalVictoriaInfirmary, Richardson Road, Newcastle upon Tyne, UK; 2,3Spinal Unit, Department of Orthopaedics, Northumbria Healthcare NHS Foundation Trust, Woodhorn Lane, Ashington, Northumberland, UK

QF36 THE PREVALENCE OF INCIDENTAL AND SYMPTOMATIC LUMBAR SYNOVIAL FACET CYSTS
Stein Janssen, Paul Ogink, Joseph Schwab
Dept of Orthopaedic Surgery, Massachusetts General Hospital, Boston, USA

QF37 MICRO-DECOMPRESSION ALONE AS GOOD AS DECOMPRESSION PLUS INSTRUMENTED FUSION FOR LUMBAR DEGENERATIVE SPONDYLOLISTHESIS. A PRAGMATIC NON-INFERIORITY STUDY FROM THE NORWEGIAN REGISTRY FOR SPINE SURGERY
Ivar Magne Austevoll, Rolf Gjestad, Tore Solberg, Jens Ivar Brox, Kjersti Storheim, Frode Rekeland, Erland Hermansen, Kari Indrekvam, Christian Hellum
Kysthospitalet in Hagevik, Orthopedic Clinic, Haukeland University, Bergen, Norway
QF38 BACTERIA IN DISCS - PAIN CAUSING OR CONTAMINATION
Peter Fritzell, Hans Tropp, Bodil Jönsson, Olle Hägg, Paul Gerdhjem, Per Ekman, Siv Andersson, Björn Knutsson, Anders Lundin, Christina Welinder-Olsson
Futurum Academy for Health and Care, Falun, Sweden

QF39 RE-OPERATION FOR RECURRENT LUMBAR DISC HERNIATION DOES NOT ADVERSELY AFFECT LONG TERM OUTCOME
Andreas Kiilerich Andresen, Christian Støttrup, Leah Carreon, Mikkel Ø. Andersen
Spine Surgery and Research, Spine Center of Southern Denmark, Middelfart, Denmark; Department of Clinical Research, University of Southern Denmark

QF40 EFFECTIVENESS OF AN ANNULAR CLOSURE DEVICE IN PATIENTS THAT MEET RCT SCREENING CRITERIA VS. A REAL-WORLD POPULATION: RETROSPECTIVE ANALYSIS OF A PROSPECTIVE REGISTRY
Adisa Kursumovic, Stefan Rath
Department of Neurosurgery, Spinal Surgery and Interventional Neuroradiology, DONAU-ISAR Klinikum Deggendorf; Germany

QF41 ABDOMINAL TRUNK MUSCLE WEAKNESS IS ASSOCIATED WITH CHRONIC LOW BACK PAIN AND LOCOMOTOR SYNDROME
Norihiro Oku, Satoshi Kato, Hideki Murakami, Satoru Demura, Noriaki Yokogawa, Takaki Shimizu, Ryo Kitagawa, Hiroyuki Tsuchiya
Department of Orthopaedic Surgery, Graduate School of Medical Sciences, Kanazawa University, Kanazawa, Japan

QF42 PARASPINAL MUSCLE, FACET JOINT, AND DISC PROBLEMS: RISK FACTORS FOR ADJACENT SEGMENT DEGENERATION AFTER LUMBAR FUSIONE
Jiin Kang, Unyoung Choi, Kyunghyun Kim, presented by Sunguk Kuh
Dept of Neurosurgery, Gangnam Severance Hospital, Seoul, South Korea

QF43 ADJACENT SEGMENT DISC DEGENERATION IS ASSOCIATED WITH THE INDIVIDUALIZED SAGITTAL SHAPE AND ALIGNMENT
Anne Mannion, Dominique A. Rothenfluh, Jeremy C. T. Fairbank, Yasemin Yavuz, Anand H Segar, Ahmet Alanay, Caglar Yilgor
Spine Center Devison, Department of Research and Development, Schulthess Klinik, Zurich, Switzerland; Oxford University Hospitals NHS Foundation Trust, Oxford, England; Department of Biostatistics, Ankara University, Ankara, Turkey; Department of Orthopedics and Traumatology, Acibadem Mehmet Ali Aydinlar University, Istanbul, Turkey

QF44 COMPARISON OF A LUMBAR GAP SCORE TO PI-LL MISMATCH TO PREDICT ADJACENT SEGMENT DISEASE IN THE DEGENERATIVE LUMBAR SPINE
Dominique A. Rothenfluh, Étienne Bourassa-Moreau, Ahmet Alanay, Caglar Yilgor
University of Oxford, Oxford, UK

QF45 SEGMENTAL RECRUITMENT DURING FLEXION-EXTENSION MOTION AFTER CERVICAL DISC ARTHROPLASTY USING A MOBILE CORE PROSTHESIS
Avinash Patwardhan, Robert Havey, Saeed Khayatzadeh, Leonard Voronov, Gerard Carandang Musculoskeletal Biomechanics Laboratory, Edward Hines, Jr. VA Hospital, Hines, USA. Department of Orthopedic Surgery and Rehabilitation, Loyola University Medical Center, Maywood, USA
10 PATIENT-REPORTED OUTCOMES AFTER SURGICAL TREATMENT FOR DEGENERATIVE DISORDERS OF THE CERVICAL SPINE: A LARGE-SCALE STUDY OF PROSPECTIVELY COLLECTED DATA
Anne F. Mannion, Hans-Jürgen Becker, Daniel Haschtmann, Tamás F. Fekete, Dezső Jeszenszky, Markus Loibl, François Pochet, Frank Kleinstück
Schulthess Klinik, Zürich, Switzerland

11 IS LAMINECTOMY AND FUSION THE BETTER CHOICE FOR LONG SEGMENTS CERVICAL SPONDYLOTIC MYELOPATHY WITH SIGNAL CHANGES ON MAGNETIC RESONANCE IMAGING? A COMPARISON OF TWO POSTERIOR SURGERIES.
Jia Nan Zhang, Yong Fan, Qi Ning Wu, Ding Jun Hao
Xi’an Hong Hui Hospital, Xi’an, China

12 A COMPARISON OF POSTOPERATIVE CHANGES OF CERVICAL SAGITTAL ALIGNMENT AND BALANCE AFTER LAMINOPLASTY BETWEEN CSM AND OPLL PART II: IMPACTS ON NEUROLOGIC IMPROVEMENT AND AXIAL NECK PAIN
Hironobu Sakaura, Atsunori Ohnishi, Akira Yamagishi, Tetsuo Ohwada
Dept of Orthopaedic Surgery, Amagasaki, Japan

13 THE REOPERATION RATES AFTER ANTERIOR FUSION AND LAMINOPLASTY OF THE CERVICAL SPINE: A 26-YEAR PERIOD SURVIVAL FUNCTION ANALYSIS
Ko Hashimoto1,2, Toshimi Aizawa1, Haruo Kanno1, Eiji Ito1, Shoichi Kokubun1
1Dept. of Orthopaedic Surgery, Tohoku University Graduate School of Medicine, Sendai, Japan; 2Dept. of Orthopaedic Surgery, Takeda General Hospital, Aizu-Wakamatsu, Fukushima, Japan

14 CAN POST-OPERATIVE CSVA, C2 SLOPE AND T1 SLOPE BE PREDICTED ACCURATELY IN CERVICAL DEFORMITY SURGERY?
Nicholas Stekas, Themistocles Protopsaltis, Justin Smith, Alex Soroceanu, Renaud Lafage, Brian Neuman, Han Jo Kim, Peter Passias, Greg Mundis, Eric Klineberg
Department of Orthopaedic Surgery, NYU Langone Orthopedic Hospital, NYU Langone Health, New York, USA

15 THE INFLUENCE OF CERVICAL SPONDYLOLISTHESIS ON CLINICAL PRESENTATION AND SURGICAL OUTCOME IN PATIENTS WITH DCM: ANALYSIS OF A GLOBAL COHORT
Aria Nouri, So Kato, George Yang, Joseph Cheng, Michael Fehlings
Department of Neurosurgery, University of Cincinnati College of Medicine, USA; Department of Neurosurgery, University of Toronto, Canada; Department of Orthopedic Surgery University of Tokyo, Japan
16 MORPHOMETRIC ANALYSIS AND SELECTION OF ALTERNATIVE C2 POSTERIOR INSTRUMENTATION IN THE CASES WITH HIGH RIDING VERTEBRAL ARTERY
Jong-Hyeok Park, Jae Tae Hong, Il Sup Kim
Department of Neurosurgery, Suwon, South Korea

17 COMPARATIVE STUDY OF SPINAL RECONSTRUCTION AFTER TOTAL EN BLOC SPONDYLECTOMY
Katsuhito Yoshioka, Hideki Murakami, Satoru Demura, Satoshi Kato, Noriaki Yokogawa, Takaki Shimizu, Norihiro Oku, Ryo Kitagawa, Hiroyuki Tsuchiya
Dept of Orthopaedic Surgery, Kanazawa, Japan

18 SYMPTOMATIC IMPLANT/CONSTRUCT FAILURE AFTER METASTATIC SPINE TUMOUR SURGERY
Naresh Kumar, Ravish Patel, Dhiraj Sonawane, Jonathan Tan, Nivetha Ravikumar, Barry Tan, Aravind Kumar
University Spine Centre, National University Hospital, Singapore
Dept of Orthopaedic Surgery, Kanazawa, Japan

19 TOTAL SPONDYLECTOMY FOR ENNEKING STAGE III GIANT CELL TUMOR OF THE MOBILE SPINE
Noriaki Yokogawa, Hideki Murakami, Satoru Demura, Satoshi Kato, Katsuhito Yoshioka, Takaki Shimizu, Norihiro Oku, Ryo Kitagawa, Hiroyuki Tsuchiya
Dept of Orthopaedic Surgery, Kanazawa Univ, Kanazawa, Japan

20 THE SURGICAL MARGINS AND COMPLETE RESECTION AS PREDICTORS OF LOCAL RECURRENCE AND SURVIVAL ON PRIMARY OSTEOSARCOMA OF THE SPINE: A SYSTEMATIC REVIEW
Bruno Pombo, Rómulo Silva, Filomena Ferreira, Margarida Areias, Ana Pinheiro, Paulo Gonçalves
Dept of Orthopaedics, Viana do Castelo, Portugal
Dept of Orthopaedic Surgery, Kanazawa Univ, Kanazawa, Japan

21 A NOVEL TREATMENT ALGORITHM FOR SPINAL METASTASES FROM KIDNEY AND THYROID CANCERS
Satoshi Kato, Hideki Murakami, Satoru Demura, Katsuhito Yoshioka, Noriaki Yokogawa, Takaki Shimizu, Norihiro Oku, Ryo Kitagawa, Hiroyuki Tsuchiya
Dept of Orthopaedic Surgery, Kanazawa University, Kanazawa, Japan

17:30–18:30 WELCOME RECEPTION
Exhibition Area & Entrance Foyer
Scientific Programme
Thursday, 20 September
### Degenerative Thoracolumbar Spine

**Plenary Hall**  
**Chairs:** Tamás Fekete, Zurich, Switzerland  
Zdenek Klezl, Derby, UK

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<td>Institute of Orthopaedic Research and Biomechanics, Ulm, Germany</td>
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<td>1Division of General Internal Medicine, Bern University Hospital, University of Bern, Bern, Switzerland; 2Horten Centre for Patient Oriented Research and Knowledge Transfer, University of Zurich, Zurich, Switzerland; 3Zurich University, Department of Biostatistics, Zurich, Switzerland</td>
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<td>Spine Surgery and Research, Spine Center of Southern Denmark, Middelfart, Denmark</td>
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<td>Spine Surgery and Research, Spine Center of Southern Denmark, Middelfart, Denmark</td>
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**Thursday, 20 September**
28 RESULTS OF A PROSPECTIVE, RANDOMIZED MULTI-CENTER STUDY WITH 2-YEAR FOLLOW-UP TO COMPARE THE PERFORMANCE OF DECOMPRESSION WITH AND WITHOUT INTERLAMINAR STABILIZATION
Joerg Franke\(^2\), Michael Rauschmann\(^1\), Sven Schmidt\(^1\), Katharina Meiler\(^2\), Matteo Mario Bonsanto\(^4\), Steffen Sola\(^3\)
\(^1\)Orthopädie Sana Klinikum Offenbach; \(^2\)Klinikum Magdeburg Universitätsklinikum Schleswig-Holstein, Klinik für Neurochirurgie, Lubeck; \(^4\)Universitätsklinikum Schleswig-Holstein, Campus Lübeck; \(^5\)Chirurgische Universitätsklinik Rostock, Germany

29 INTERTRANSVERSE FUSION RATES FOLLOWING NON-INSTRUMENTED LUMBAR FUSION. RESULTS FROM A RANDOMIZED DOUBLE BLIND CLINICAL TRIAL OF ABM/P-15 VERSUS ALLOGRAFT
Andreas Kiilerich Andresen, Michael Kjær Jacobsen, Annette Jespersen, Leah Carreon, Søren Overgård, Mikkel Ø. Andersen
Spine Surgery and Research, Spine Center of Southern Denmark, Middelfart, Denmark; Department of Orthopaedic Surgery and Traumatology, Odense University Hospital, Denmark; Department of Clinical Research, University of Southern Denmark

30 ADJACENT DISC DEGENERATION AFTER LUMBAR TOTAL DISC REPLACEMENT OR NON-OPERATIVE TREATMENT: A RANDOMISED STUDY WITH EIGHT-YEAR FOLLOW-UP
Håvard Furunes \(^{1,2,3}\), Christian Hellum \(^4\), Ansgar Espeland \(^5,6\), Jens Ivar Brox \(^{6,7}\), Milada Cvancarova Småstuen \(^{6,7}\), Linda Berg \(^{8,10}\), Kjersti Storheim \(^8\)
\(^1\)FORMI, Oslo University Hospital, Norway; \(^2\)University of Oslo, Norway; \(^3\)Surgical dept, Gjøvik Hospital, Norway; \(^4\)Division of Orthopaedic Surgery, Oslo University Hospital, Norway; \(^5\)Dept of Radiology, Haukeland University Hospital, Norway; \(^6\)Dept of Clinical Medicine, University of Bergen, Norway; \(^7\)Dept for Physical Medicine and Rehabilitation, Oslo University Hospital, Norway; \(^8\)Faculty of Health Sciences, Oslo Metropolitan University, Norway; \(^9\)Dept of Radiology, Nordland Hospital, Norway; \(^10\)Dept of Clinical Medicine, University of Tromsø, Norway

31 LUMBAR ARTIFICIAL DISC REPLACEMENT WITH A NOVEL CONTROLLED MOBILE CORE DEVICE: FIVE YEAR RESULTS FROM A RANDOMIZED CONTROLLED FDA TRIAL
Rolando Garcia, James Yue
Orthopedic Care Center, Aventura, USA

32 DOES A WEB-BASED SPINE PLATFORM FEATURING SOCIAL INTERACTION AND ANIMATED INFORMATION AFFECT PATIENT REPORTED OUTCOMES IN PATIENTS UNDERTAKING LUMBAR SPINE FUSION SURGERY? A RANDOMIZED CLINICAL TRIAL
Janni Strøm, Claus Vinther Nielsen, Lene Bastrup Jørgensen, Malene Laursen
Elective Surgery Centre, Silkeborg Regional Hospital, Denmark

10:00–10:30  ■ COFFEE BREAK IN THE EXHIBITION AREA

10:30–12:00  ■ Presidential Address and Medal Lecture
Plenary Hall
Chairs: Tim Pigott, Liverpool, UK
Ferran Pellisé, Barcelona, Spain
Luis Alvarez, Madrid, Spain
10:30  EUROSPINE Medal Lecture 2018
New therapies to repair the neuronal hardware and improve functional recovery after spinal cord injury
Martin E. Schwab, Zurich, Switzerland

11:00  EUROSPINE Presidential Address
Frank Kandziora, Frankfurt, Germany, EUROSPINE President 2018

11:30  Honorary Members 2018
Honorary Member: Carlos Villanueva, Barcelona, Spain
Laudatio: Ferran Pellisé, Barcelona, Spain
Presentation of Honorary membership certificate

11:40  Honorary Member: Jiří Dvořák, Zurich, Switzerland
Laudatio: Anne Mannion, Zurich, Switzerland
Presentation of Honorary membership certificate

11:50  Announcement of the EUROSPINE Grants 2018
Björn Rydevik, Gothenburg, Sweden

11:57  EuSSAB
Christoph Siepe, Munich, Germany

12:00–14:00  EUROSPINE LUNCH SYMPOSIA

12:00–14:00  EUROSPINE LUNCH SYMPOSIUM 3
Room 112
Adolescent Spinal Deformities and Treatment Options
Chairs: Hossein Mehdian, London, UK
         Ken Cheung, Hong Kong

- Principles in the management of syndromal spinal deformities
  Ken Cheung, Hong Kong
  Discussion
- Pre-operative planning, adding on and LIV selection for Lenke Type 1A
  Hossein Mehdian, London, UK
  Discussion
- Minimally invasive and fussiness approach for the treatment AIS,
  “Is anterior surgery coming back”?
  Ahmet Alanay, Istanbul, Turkey
  Discussion
- Treatment options in AIS with high magnitude curves; “Traction, PSO and PVCR”
  Azmi Hamzaoglu, Istanbul, Turkey
**12:00–14:00**

**EUROSPINE LUNCH SYMPOSIUM 4**

**Room 111**

**Refining your Osteotomy Technique**

**Chairs:** Pedro Berjano, Milan, Italy  
Ibrahim Obeid, Bordeaux, France

- The perfect PSO. Surgical maneuvers, tips and tricks for a brilliant surgical execution  
  Ahmet Alanay, Istanbul, Turkey
- Discussion
- Achieving lasting results. Construct durability in three-column osteotomies  
  Pedro Berjano, Milan, Italy
- Discussion
- A hard bone to bite. Complex osteotomies in multioperated patients  
  Ibrahim Obeid, Bordeaux, France
- Discussion
- This is not a single player concert. Organization, strategy and team for improved safety and outcomes  
  Ferran Pellisé, Barcelona, Spain
- Discussion
- Panel Discussion – Questions and Answers

**14:00–15:20**

**Growing Spine, Minimally Invasive Spine Surgery**

**Plenary Hall**

**Chairs:** Viola Bullmann, Cologne, Germany  
Phil Sell, Leicester, UK

33  **THE 75 DEGREES THRESHOLD IN CEREBRAL PALSY WITH SCOLIOSIS IN ONLY POSTERIOR SURGERY WITH PEDICLE SCREWS UNTIL WHEN WE CAN JUST OBSERVE SCOLIOSIS PROGRESSION IN CP PATIENTS WITH GMFCS IV AND V?**  
Min Seok Kang, Tae Hoon Kim, In Seok Son, Suk Ha Lee, Seung Woo Suh, Jin Ho Hwang  
CM General Hospital, Dept of Orthopedic Surgery, Seoul, South Korea

34  **EFFECT OF BODY MASS INDEX PERCENTILE ON CLINICAL AND RADIO-GRAPHIC OUTCOME AFTER POSTERIOR INSTRUMENTED FUSION FOR ADOLESCENT IDIOPATHIC SCOLIOSIS**  
Laura Scaramuzzo, Fabrizio Giudici, Giuseppe Barone, Leone Minoia, Marino Archetti,  
Domenico Ravier, Antonino Zagra  
Spine Surgery Division 1, Milan, Italy
35 A CRITICAL THORACIC KYPHOSIS IS REQUIRED TO PREVENT SAGITTAL PLANE DETERIORATION IN SELECTIVE THORACIC FUSIONS IN LENKE I AND II AIS
Dominique A. Rothenfluh, Alexandra Stratton, Colin Nnadi, Nicolas Beresford-Cleary
University of Oxford, Oxford, UK

36 LESS IS MORE: SIGNIFICANT CORONAL CORRECTION OF AIS DEFORMITY PREDICTS THORACIC HYPOKYPHOSIS
Oded Hershkovich, Areena Dsouza, Paul Rushton, Edward Bayley, Michael Grevitt
The Centre for Spinal Studies and Surgery (CSSS); Queen’s Medical Centre; Nottingham University Hospitals, UK

37 WHERE TO STOP DISTALLY IN LENKE MODIFIER C AIS WITH LUMBAR CURVE MORE THAN 60°: L3 OR L4?
Yong Qi, Xiaodong Qin, Leilei Xu, Bangping Qian, Zhen Liu, Zezhang Zhu
Dept of Spine Surgery, Drum Tower Hospital of Nanjing University Medical School, China

38 SINGLE ROD INSTRUMENTATION FOR THE POSTERIOR CORRECTION AND FUSION OF NEUROMUSCULAR SCOLIOSIS
Farhaan Altaf, Hilali Noordeen, presented by Girish Swamy
Royal National Orthopaedic Hospital, Stanmore, London

39 COMPARATIVE STUDY OF MINIMALLY INVASIVE PERCUTANEOUS PEDICLE SCREW FIXATION AND OPEN SURGERY IN THE TREATMENT OF THORACOLUMBAR FRACTURES
Yongyuan Zhang, Xiji Wang, Dingjun Hao, Honghui Sun
Department of Spine Surgery, Honghui Hospital, Xi’an Jiaotong University College of Medicine, Xi’an, Shaanxi, China

40 INTRAOPERATIVE STIMULATED AND SPONTANEOUS EMG MONITORING FOR IMPROVING THE ACCURACY AND SAFETY OF MINIMALLY INVASIVE PERCUTANEOUS LUMBOSACRAL SCREW PLACEMENT
Pablo Mendivil, Jesus Lafuente, Guillermo Vergara, Alberto Aleman, Nicolas Sampron
Spinal Unit, Department of General Neurosurgery; Neurocentro Salta, IMAC Instituto Medico de Alta Complegidad; Salta, Argentina

41 DOES L4/5 POSE ADDITIONAL NEUROLOGIC RISK IN LATERAL LUMBAR INTERBODY FUSION?
Toshiyuki Shirahata, Stephan Salzmann, Oliver Sax, Jingyan Yang, Jennifer Shue, Andrew Sama, Cammisa Frank, Federico Girardi, Alexander Hughes
Department of Orthopedic Surgery, Spine and Scoliosis Service, Hospital for Special Surgery, New York, USA

42 A SYSTEMATIC REVIEW ON THE OUTCOMES OF ENDOSCOPIC DISCECTOMY AND MINIMAL INVASIVE DISCECTOMY COMPARED TO CONVENTIONAL MICRODISCECTOMY
Giuseppe Lambros Morassi, Sherief Elsayed, Nasir Quraishi
Centre for Spinal Studies and Surgery, Nottingham University Hospitals, Nottingham, UK

15:20–15:50 □ COFFEE BREAK IN THE EXHIBITION AREA
43 ARE ALTERATIONS IN THORACIC KYPHOSIS AND LUMBAR LORDOSIS IN ASD MORE PRONOUNCED AT THE PROXIMAL OR DISTAL LEVELS?
Ayman Assi, Virginie Lafage, Wafa Skalli, Nour Khalil, Mario Mekhael, Renée Maria Saliby, Georges Kawkabani, Ziad Bakouny, Mohammad Karam, Aren Joe Bizdikian, Fares Yared, Chris Labaki, Joe Ghanimeh, Joeffroy Olayek, Georges Mjaess, Michel Salameh, Gaby Kreicht, Khalil Kharrat, Ismat Ghanem
Faculty of Medicine, University of Saint-Joseph in Beirut

44 EFFECTS OF RESTORING INDIVIDUALIZED SAGITTAL SHAPE AND ALIGNMENT ON MECHANICAL COMPLICATIONS AND PATIENT-REPORTED OUTCOMES IN ELDERLY PATIENTS FUSED TO PELVIS
Caglar Yilgor, Suna Lahut, Kadir Abul, Irem E. Sayin, Javier Pizones, Ibrahim Obeid, Frank Kleinstuck, Francisco Javier Sanchez, Perez-Grueso, Emre Acaroglu, Ferran Pellise, Ahmet Alanay, ESSG European Spine Study Group
1Department of Orthopedics and Traumatology, Acibadem Mehmet Ali Aydinlar University, Istanbul, Turkey; 2Comprehensive Spine Center, Acibadem Maslak Hospital, Istanbul, Turkey; 3Department of Biostatistics, Ankara University, Ankara, Turkey; 4Spine Surgery Unit, Bordeaux University Hospital, Bordeaux, France; 5Spine Surgery Unit, Hospital Universitari Vall d’Hebron, Barcelona, Spain; 6Spine Center Division, Department of Orthopedics and Neurosurgery, Schulthess Klinik, Zurich, Switzerland; 7Spine Surgery Unit, Hospital Universitario la Paz, Madrid, Spain; 8Ankara ARTES Spine Center, Ankara, Turkey; 9Vall Hebron Institute of Research (VHIR) Barcelona-Spain

45 SCOLIOSIS CORRECTIVE SURGERY IMPACT ON HEALTH RELATED QUALITY OF LIFE
Louis Boissiere, Mitsuru Takemoto, Derek Cawley, David Kieser, Anouar Bourghli, Caglar Yilgor, Ahmet Alanay, Emre Acaroglu, Ferran Pellise, Frank Kleinstuck, Francisco J. Perez-Grueso, Olivier Gille, Jean-Marc Vital, Ibrahim Obeid, ESSG
Bordeaux University Hospital, Bordeaux, France

46 RISK BENEFIT ASSESSMENT OF MAJOR VERSUS MINOR OSTEOTOMIES FOR FLEXIBLE AND RIGID CERVICAL DEFORMITY CORRECTION
Peter Passias, Samantha Horn, Renaud Lafage, Virginie Lafage, Justin Smith, Breton Line, Shaleen Vira, Gregory Mundis, Bassel Diebo, Cole Bortz, Frank Segreto, Themistocles Protopsaltis, Han Jo Kim, Alan Daniels, Eric Klineberg, Douglas Burton, Robert Hart, Frank Schwab, Shay Bess, Christopher Shaffrey, Christopher Ames, International Spine Study Group Departments of Orthopaedic and Neurologic Surgery, NYU Langone Orthopedic Hospital/NY Spine Institute, New York, USA

47 COMPARISON OF BEST VERSUS WORST CLINICAL RESULTS IN THE ADULT DEFORMITY PATIENTS TWO YEARS AFTER CORRECTIVE LONG FUSION FROM THORACIC TO PELVIS
Daisuke Togawa, Shin Oe, Tomohiko Hasegawa, Yu Yamato, Go Yoshida, Tomohiro Banno, Hideyuki Arima, Yuki Mihara, Hiroki Ushirozako, Yukihiro Matsuyama
Div of Geriatric Musculoskeletal Health, Hamamatsu Univ. Japan
48  ROTEM-GUIDED TRANSFUSION DURING PEDICLE SUBTRACTION OSTEOTOMY FOR ADULT SPINAL DEFORMITY: A PROPENSITY SCORE-MATCHED COHORT ANALYSIS

Thomas Buell, Davis Taylor, Ching-Jen Chen, Jeffrey Mullin, Marcus Mazur, Chun-Po Yen, Mark Shaffrey, Justin Smith, Christopher Shaffrey, Bhiken Naik

Dept of Neurosurgery, University of Virginia Health System, Charlottesville, USA

49  COMPLICATIONS AFTER SPINOPELVIC FIXATION WITH ILIAC SCREWS IN 260 ADULT PATIENTS WITH 2-YEAR MINIMUM FOLLOW-UP

James Nguyen, Thomas Buell, Tony Wang, Jeffrey Mullin, Marcus Mazur, Chun-Po Yen, Christopher Shaffrey, Justin Smith

Department of Neurological Surgery, University of Virginia, Charlottesville, USA

50  PROBABILITY OF SEVERE FRAILTY DEVELOPMENT AMONG OPERATIVE AND NON-OPERATIVE ADULT SPINAL DEFORMITY PATIENTS: AN ACTUARIAL SURVIVORSHIP ANALYSIS OVER A 3-YEAR PERIOD

Peter Passias, Frank Segreto, Samantha Horn, Cole Bortz, Cheongeun Oh, Virginie Lafage, Renaud Lafage, Justin Smith, Alan Daniels, Breton Line

NYU Langone Orthopaedic Hospital, Departments of Neurological and Orthopaedic Surgery, Manhattan, USA

51  PREGNANCY AND CHILDBIRTH IN PATIENTS WITH IDIOPATHIC SCOLIOSIS

Sergey Kolesov, Alexander Stenkov, Andrey Panteleyev

N.N. Priorov Central Institute of Traumatology and Orthopedics, Moscow, Russia

17:05  EUROSPINE MEMBER COCKTAIL and GENERAL ASSEMBLY

Foyer and Room 111

Members only

20:00  OFFICIAL CONGRESS EVENING

Café del Mar, Barcelona

(At own expense)

Attire: smart casual
Scientific Programme
Friday, 21 September
08:30–10:00

**Trauma, Diagnostics and Imaging**

Plenary Hall

Chairs: Matti Scholz, Frankfurt Germany
       Marco Teli, Liverpool, UK

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52  CLINICAL AND RADIOLOGICAL OUTCOMES OF CONSERVATIVE TREATMENT FOR UNILATERAL SAGITTALLY SPLIT FRACTURES OF THE C1 LATERAL MASS

   Jong-Beom Park, Young-Yul Kim

   Dept of Orthopaedic Surgery, The Catholic University of Korea, Seoul, Korea

53  FUNCTIONAL OUTCOME OF ELDERLY PATIENTS TREATED FOR ODONTOID FRACTURE. A MULTICENTER STUDY

   Giorgio Lofrese, Antonio Musio, Antonio Martucci, Roberto Donati, Federico De Iure, Francesco Cultrera, Pasquale De Bonis

   Neurosurgery Division, Ospedale “M. Bufalini”, Cesena, Italy; Department of Spine Surgery, Ospedale Maggiore “C.A. Pizzardi”, Bologna, Italy; Neurosurgery Division, University Hospital S.Anna, Cona di Ferrara, Italy

54  THE WINDOW OF OPPORTUNITY FOR SURGICAL DECOMPRESSION IN PATIENTS WITH ACUTE TRAUMATIC CERVICAL SPINAL CORD INJURY

   Marko Jug, Nata a Kej ar, Matej Cimerman, Fajko Bajrovi

   Dept of Traumatology, Ljubljana, Slovenia

55  EARLY VERSUS DELAYED DECOMPRESSION FOR TRAUMATIC CERVICAL SPINAL CORD INJURY: APPLICATION OF THE AOSPINE SUBAXIAL CERVICAL SPINAL INJURY CLASSIFICATION SYSTEM TO GUIDE SURGICAL TIMING

   Yong Fan, Jin Peng Du, Ding Jun Hao

   Dept of Spine surgery, Xi’an China

56  IN CERVICAL SPONDYLOTIC MYELOPATHY, IN THE EVALUATION OF C2-7 ANGLE, SPINAL CANAL STENOSIS IS UNDERESTIMATED WHEN THE DIFFERENCE BETWEEN MRI AND DCTM EXTENSION POSITION OR XP EXTENSION POSITION IS LARGER THAN 17 DEGREES

   Atsushi Tagami, Makoto Osaki, Keiichi Tsuda, Shinji Adachi, Shuta Yamada, Chieko Noguchi

   Dept of Orthopaedics Surgery, Nagasaki, Japan

57  PREDICTORS OF KYPHOTIC DEFORMITY AFTER POSTERIOR FIXATION FOR THORACOLUMBAR BURST FRACTURE

   Masahiro Hirahata, Keisuke Ishii, Tomoaki Kitagawa

   Dept. of Orthop. Surg., Teikyo Univ., Tokyo, Japan

58  SPINAL PRIMARY PAIN GENERATOR IDENTIFICATION BY CT-SPECT

   Gabriel Tender, Erin Fannin, Anthony DiGiorgio

   Dept of Neurosurgery, LSU, New Orleans, USA
59 MULTIFIDUS MUSCLE MORPHOLOGY, FUNCTION AND BODY COMPOSITION IN UNIVERSITY LEVEL ICE HOCKEY PLAYERS WITH AND WITHOUT LOW BACK PAIN
Maryse Fortin, Amanda Rizk, Stephane Frenette, Mathieu Boily, Hassan Rivaz
1) PERFORM Centre, Concordia University, Montreal, Quebec, Canada; 2) Concordia University, Department of Electrical Engineering, Montreal, Quebec, Canada; 3) McGill University Health Centre, Department of Diagnostic Radiology, Montreal, Quebec, Canada

60 3D MODELING IN THE PLANNING OF SPINAL DEFORMITY SURGERIES
Sergey Kolesov, Alexander Stenkov, Andrey Panteleyev
N.N. Priorov Central Institute of Traumatology and Orthopedics, Moscow, Russia

61 THE CORRELATION ANALYSIS OF RADIOLOGIC PARAMETERS OF PELVIS WITH THE PELVIC INCIDENCE
Chang-Hoon Jeon, Nam-Su Chung, Han-Dong Lee
Dept of Orthopedic surgery, Suwon, South Korea

62 DOES PARASPINAL FATTY MUSCULAR DEGENERATION INFLUENCE SURGICAL INDICATION IN DEGENERATIVE LUMBAR LYSTHESIS?
Christina Polan, Marcus Jäger, Marcel Haversath, Tjark Tassemeier
Orthopedic and Trauma Department, University Hospital Essen, Germany

10:00–10:30 COFFEE BREAK IN THE EXHIBITION AREA

10:30–12:00 The ‘Best of Show’ and Award papers
The highest scored abstract submissions
The 2018 Best Podium Award will be evaluated out of the presentations 63-69 of this session.
The audience is asked to vote via the EUROSPINE app.
Plenary Hall
Chairs: Margareta Nordin, Romorantin, France
Thomas Blattert, Schwarzach, Germany

63 NOVEL MUTATIONS OF CCDC40 ARE ASSOCIATED WITH THE INCIDENCE OF IDIOPATHIC SCOLIOSIS POSSIBLY VIA DEFECTIVE CEREBROSPINAL FLUID FLOW
Leilei Xu, Chao Xia, Yong Qiu, Zezhang Zhu
Department of Spine Surgery, the Affiliated Drum Tower Hospital of Nanjing University Medical School, Nanjing, China

64 QUALITY OF LIFE IN 1519 TREATED OR UNTREATED MALES AND FEMALES WITH IDIOPATHIC SCOLIOSIS
Elias Diarbakerli, Anna Grauers, Aina Danielsson, Allan Abbott, Paul Gerdhem
Dept of Clinical Sciences, Intervention and Technology, Karolinska Institutet, Stockholm, Sweden

65 IMPACT OF SERIOUS ADVERSE EVENTS ON HEALTH-RELATED QUALITY OF LIFE MEASURES FOLLOWING SURGERY FOR ADULT SYMPTOMATIC LUMBAR SCOLIOSIS
Justin Smith, Christopher Shaffrey, Michael Kelly, Christine Baldus, Lawrence Lenke, Stephen Lewis, Stefan Parent, Shay Bess, Frank Schwab, Keith Bridwell
Dept of Neurosurgery, University of Virginia, Charlottesville, USA; Dept of Orthopedic
66 IN-HOSPITAL COMPLICATION RATE FOLLOWING MICROENDOSCOPIC VERSUS OPEN LUMBAR LAMINECTOMY: A PROPENSITY SCORE-MATCHED ANALYSIS
Kazuhito Soma, Takeshi Oichi, Yasushi Oshima
Dept of Orthopedic Surgery, Tokyo, Japan

67 SUCCESSFUL CLINICAL OUTCOMES FOLLOWING SURGERY FOR SEVERE CERVICAL DEFORMITY ARE DEPENDENT UPON ACHIEVING SUFFICIENT CERVICAL SAGITTAL ALIGNMENT
Themistocles Protopsaltis, Nicholas Stekas, Justin Smith, Alex Soroceanu, Renaud Lafage, Alan Daniels, Han Jo Kim, Peter Passias, Greg Mundis, Eric Klineberg, Kojo Hamilton, Munish Gupta, Virginie Lafage, Robert Hart, Frank Schwab, Doug Burton, Shay Bess, Christopher Shaffrey, Christopher Ames, Christopher Ames, ISSG
Department of Orthopaedic Surgery, NYU Langone Orthopedic Hospital, NYU Langone Health, New York, USA

68 WHAT FACTORS CHARACTERIZE AN INDICATION FOR SURGERY IN LUMBAR SPINAL STENOSIS?
Schulthess Klinik, Zürich, Switzerland; Horten Centre, Zürich, Switzerland; University Hospital Zürich, Zürich, Switzerland; University Hospital Zürich, Zürich, Switzerland

69 OUTCOME EVALUATION: HRQOL VS PATIENT SATISFACTION
Susana Núñez-Pereira, Miquel Serra-Burriel, Alba Vila-Casademunt, Sleiman Haddad, Francesca Soler-Santasusagna, Juan Bagó, Francisco J. Sánchez Pérez-Grueso, Emre R. Acaroglu, Frank Kleinstueck, Ibrahim Obeid, Ahmet Alanay, Ferran Pellisé, ESSG European Spine Study Group
Vall d’Hebron Institute of Research (VHIR), Barcelona, Spain

11:30 Winner of 2018 Grammer/European Spine Journal Award
Kelly R. Wade, Meredith L. Schollum, Peter A. Robertson, Ashvin Thambyah, Neil D. Broom (2017)
A MORE REALISTIC DISC HERNIATION MODEL INCORPORATING COMPRESSION, FLEXION AND FACET-CONSTRAINED SHEAR: A MECHANICAL AND MICROSTRUCTURAL ANALYSIS. PART I: LOW RATE LOADING.
Eur Spine J; 26:2616–2628
Zhi Shan, Kelly R. Wade, Meredith L. Schollum, Peter A. Robertson, Ashvin Thambyah, Neil D. Broom (2017)
A MORE REALISTIC DISC HERNIATION MODEL INCORPORATING COMPRESSION, FLEXION AND FACET-CONSTRAINED SHEAR: A MECHANICAL AND MICROSTRUCTURAL ANALYSIS. PART II: HIGH RATE OR ‘SURPRISE’ LOADING.
Eur Spine J; 26:2629–2641
11:40 Max Aebi Award for Clinical Sciences 2017/2018
THE VALUE OF PATIENT GLOBAL ASSESSMENT IN LUMBAR SPINE SURGERY: AN EVALUATION BASED ON MORE THAN 90,000 PATIENTS
Catharina Parai, Olle Hägg, Bengt Lind, Helena Brisby
Eur Spine J (2018) 27: 554-563

11:50 Announcement of the Best Podium Award

12:00–14:00 EUROSPINE LUNCH SYMPOSIA

12:00–14:00 EUROSPINE LUNCH SYMPOSIUM 5
Plenary Hall
Aging Spine – How to Achieve Optimal Results?
Chairs: Klaus Schnake, Fuerth, Germany
Stavros Stavridis, Thessaloniki, Greece

- Comorbidities in elderly patients (Anaesthetic view) – what surgeons should consider
  Nicolai Goettel, Basel, Switzerland
  Discussion

- Dealing with osteoporotic bone – how to avoid complications?
  Cordula Netzer, Basel, Switzerland
  Discussion

- Indications for surgical treatment in octogenarians
  Yu-Mi Ryang, Munich, Germany
  Discussion

- Degenerative Instability – when to fuse in the elderly?
  Philip Horsting, Nijmegen, Netherlands
  Discussion

- Panel Discussion – Questions and Answers

12:00–14:00 EUROSPINE LUNCH SYMPOSIUM 6
Room 112
Spondylolysis/Spondylolisthesis
Chairs: Ferran Pellisé, Barcelona, Spain
        Luigi Nasto, Genoa, Italy

- Natural history, Pathophysiology and Treatment options
  Ferran Pellise, Barcelona, Spain
  Discussion
Scientific Programme Friday, 21 September

12:00–14:00

EUROSPINE LUNCH SYMPOSIUM 7
Room 111
The Role of Spine Registries Today (Spine Tango)
Chairs: Anne Mannion, Zurich, Switzerland
        Emin Aghayev, Zurich, Switzerland

- Introduction
  Anne F. Mannion, Zurich, Switzerland

- Why I am not registering: weaknesses, limitations, problems
  Finn B. Christensen, Aarhus, Denmark

- Why I am registering: strengths and benefits
  Paulo Pereira, Porto, Portugal

- Open discussion on pros and cons of a spine registry
  Podium: Finn B. Christensen, P. Pereira, Justine Norwitz, Anne F. Mannion, Samuel Morris, Martin Wilby
  Moderator: Emin Aghayev

- Summary of the discussion and closing words
  Emin Aghayev, Zurich, Switzerland

14:00–15:20

CONCURRENT SESSIONS
QuickFires – Short Communications

14:00

New Techniques and Minimally Invasive Spine Surgery
Plenary Hall
Chairs: Everard Munting, Biez, Belgium
        Juan Bago, Barcelona, Spain

- A systematic review of surgical techniques for treatment of Spondylolysis
  Luigi Nasto, Milan, Italy

- Discussion

- Surgical treatment of adult Spondylolithesis
  Azmi Hamzaoglu, Istanbul, Turkey

- Discussion

- High Grade L5/S1 Lytic Spondylolithesis: Update on Surgical Treatments
  Hossein Mehdian, London, UK

- Discussion

- Panel Discussion – Questions and Answers
QF46 TWO-YEAR OUTCOMES OF PATIENTS TREATED WITH BVN ABLATION FOR THE RELIEF OF CHRONIC LOW BACK PAIN: RESULTS OF THE SMART TRIAL
Bernhard Meyer, Peter Vajkoczy, Rick Sasso, Sotirios Michalitsis, Al Rhyne, Jeff Fishground, Jorg Franke
Department of orthopedics, Klinikum Magdeburg, Germany

QF47 NON-FUSION THORACOSCOPIC ANTERIOR VERTEBRAL BODY TETHERING FOR ADOLESCENT IDIOPATHIC SCOLIOSIS: PRELIMINARY RESULTS OF A SINGLE EUROPEAN CENTER
Ahmet Alanay, Barbaros O Cebeci, Kadir Abul, Suna Lahut, Gökhan Ergene, Sahin Senay, Caglar Yilgor
Department of Orthopedics and Traumatology, Acibadem Mehmet Ali Aydinlar University, Istanbul, Turkey; Comprehensive Spine Center, Acibadem Maslak Hospital, Istanbul, Turkey; Thoracic Surgery, Acibadem Maslak Hospital, Istanbul, Turkey; Acibadem Mehmet Ali Aydinlar University School of Medicine, Turkey

QF48 ANTERIOR VERTEBRAL BODY TETHERING FOR THE TREATMENT OF IDIOPATHIC SCOLIOSIS: FEASIBILITY, OUTCOMES, AND COMPLICATIONS
Firoz Miyanji, Luigi Nasto, Fahimeh Karimi, Eva Habib, Andrea Simmonds
Dept of Orthopaedic Surgery, Vancouver, Canada

QF49 DOES THE USE OF ROBOTIC GUIDANCE AND NAVIGATION REDUCE THE INCIDENCE OF PEDICLE SCREW REVISIONS?
Victor E. Staartjes, Anita M. Klukowska, Marc L. Schröder
Department of Neurosurgery, Bergman Clinics, Amsterdam, Netherlands

QF50 MINIMALLY INVASIVE CANTILEVER CORRECTION TECHNIQUE FOR ADULT SPINAL DEFORMITY USING REDUCTION PERCUTANEOUS PEDICLE SCREW SYSTEM – TECHNICAL NOTES
Sei Terayama, Yasuo Ohori, Azusa Sudo
Dept. of Orthopedic, Tokyo, Japan

QF51 DEVELOPMENT OF PREOPERATIVE COMPUTER MODELS WHICH ACCURATELY PREDICT ANSWERS TO ALL INDIVIDUAL QUESTIONS ON SRS-22 AT 2 YEAR FOLLOW UP: A STEP TOWARDS INDIVIDUALIZED MEDICINE
Vall d’Hebron Institute o Research (VHIR), Barcelona, Spain

QF52 APPLICATION OF GELATIN SPONGE IMPREGNATED WITH A MIXTURE OF 3 DRUGS TO INTRAOPERATIVE NERVE ROOT BLOCK TO PROMOTE EARLY POSTOPERATIVE RECOVERY OF LUMBAR DISC HERNIATION
Jin Peng Du, Yong Fan, Ding Jun Hao
Dept of Spine Surgery, Xi’an, China

QF53 ANULAR CLOSURE REDUCES RECURRENT HERNIATION AND REOPERATION IN A HIGH-RISK POPULATION FOLLOWING LUMBAR DISCECTOMY: 3-YEAR DATA FROM A MULTI-CENTER, PROSPECTIVE, RANDOMIZED TRIAL
QF54 ANATOMICAL FEASIBILITY OF EXTRADURAL TRANSFERRING S2 AND S3 VENTRAL ROOTS TO S1 VENTRAL ROOT FOR RESTORING NEUROGENIC BLADDER IN SPINAL CORD INJURY
Kaixiang Yang, Xiaojian Cao
Department of Orthopaedics, Nanjing, China

QF55 MRI CHANGE AFTER PERCUTANEOUS ENDOSCOPIC LUMBAR FORAMINO-PLASTY FOR LUMBAR FORAMINAL STENOSIS
Jongchul Chung, Changbong Kong, Woosung Sun, Byongwook Hwang, Hyungdong Kim
Department of Neurosurgery, Busan, Korea

QF56 ASSESSMENT OF PSOAS MUSCLE DAMAGE AND CLINICAL OUTCOMES IN THE EARLY POSTOPERATIVE PERIOD AFTER LATERAL LUMBAR INTERBODY FUSION
Shimei Tanida, Shunsuke Fujibayashi, Bungo Otsuki, Shuichi Matsuda
Department of Orthopaedic Surgery, Graduate School of Medicine, Kyoto University, Japan

QF57 A NOVEL SURGICAL APPROACH FOR TRANSPLANTATION OF OLFATORY ENSheATHING CELLS FOLLOWING A TRANSECTION TYPE SPINAL CORD INJURY IN MICE
Ronak Reshamwala, Todd Shelper, Megha Shah, James St John
Griffith University, Queensland, Australia

QF58 MINIMALLY INVASIVE LATERAL LUMBAR INTERBODY FUSION AND POSTERIOR INSTRUMENTATION FOR CLINICAL ADJACENT SEGMENT PATHOLOGY: A RETROSPECTIVE MATCHED COHORT STUDY WITH ONLY POSTERIOR INSTRUMENTATION
Hyung-Ki Min, Kee-Yong Ha, Young-Hoon Kim, Sang-II Kim, Hyung-Youl Park, In-Soo Oh, Jun-Yeong Seo, Dong-Gune Chang
Department of Orthopedic Surgery, Seoul St. Mary’s Hospital, College of Medicine, The Catholic University of Korea, Seoul, Korea

QF59 MISS TLIF VS XLIF IN THE L4-L5 LEVEL: COMPLICATIONS AND OUTCOMES
Juan Del Castillo-Calcáneo, Khai Lam
Department of Neurosurgery, Pemex, Mexico City, Mexico; London Bridge Hospital, London, UK

QF60 MIDDLE TERM RESULTS OF MINIMALLY INVASIVE UNILATERAL PEDICLE SCREW FIXATION COMBINED WITH TRANSFORAMINAL INTERBODY FUSION FOR THE TREATMENT OF ONE LEVEL DEGENERATIVE DISC DISEASE IN THE LUMBAR SPINE
Giuseppe Morassi, Lykourgos Kollintzas, Sherief Elsayed, Iosif Tarazi
Brighton and Sussex University Hospitals

14:00 Trauma, Diagnostics and Imaging, Epidemiology
Room 111
Chairs: Sebastiaan Schelfaut, Leuven, Belgium
Daniel Haschtmann, Zurich, Switzerland
QF61 CLINICAL ANALYSIS OF RADIOLOGIC MEASUREMENT FOR BASILAR INVAGINATION: IS IT POSSIBLE TO PREDICT POSTOPERATIVE OUTCOME BY RADIOLOGIC MEASUREMENT?
Jong-Hyeok Park, Jae Taek Hong, Il Sup Kim
Department of Neurosurgery, Suwon, South Korea

QF62 CLINICAL PREDICTORS AND OPTIMAL MANAGEMENT FOR PATIENTS WITH CERVICAL SPINAL CORD INJURY WITHOUT MAJOR BONE INJURY
Hideaki Nakajima, Ai Takahashi, Ippei Kitade, Shuji Watanabe, Kazuya Honjoh, Akihiko Matsumine
Department of Orthopaedics and Rehabilitation Medicine, Faculty of Medical Sciences University of Fukui, Fukui, Japan

QF63 PREDICTIVE VALUES OF MAGNETIC RESONANCE IMAGING FEATURES FOR TRACHEOSTOMY IN TRAUMATIC CERVICAL SPINAL CORD INJURY
Tae Seok Jeong, Sang Gu Lee, Woo Kyung Kim, Yong Ahn, Seong Son
Dept of Neurosurgery, Incheon, South Korea

QF64 NEUROMONITORING SIGNAL CHANGES IN CERVICAL SPINE SURGERY: WHEN IS IT SIGNIFICANT?
Joshua Decruz, Ho Yin Wong, Jacob Oh, Yoong Leong
Department of Orthopaedic Surgery, Khoo Teck Puat Hospital, Singapore

QF65 RECRUITMENT OF OTHER REGIONS IN BRAIN FUNCTIONAL CONNECTIVITY NETWORK AFTER LAMINOPLASTY IN PATIENTS WITH CERVICAL MYELOPATHY
Shota Takenaka, Takashi Kaito, Takahiro Makino, Yusuke Sakai, Junichi Kushioka, Hisashi Tanaka, Yoshiyuki Watanabe, Shigeyuki Kan, Masahiko Shibata
Dept of Orthopaedic Surgery, Osaka University, Osaka, Japan

QF66 CERVICAL SPINAL STENOSIS WITH COEXISTING ROTATOR CUFF TEAR: A NATIONWIDE REVIEW OF RECORDS FROM 2005 TO 2014
Michael Faloon, Conor Dunn, Jennifer Kurowicki, Kimona Issa, Anthony Festa, Anthony Scillia, Vincent McInerney, Arash Emami
Seton Hall University, School of Medicine, Dept of Orthopaedic Surgery, Paterson, USA

QF67 VERTEBRAL BODY LAVAGE REDUCES HEMODYNAMIC RESPONSE TO VERTEBRAL BODY AUGMENTATION
Christoph Albers, Philipp Schott, Sufian Ahmad, Lorin Benneker, Nadine Nieuwkamp, Sven Hoppe
Dept. of Orthopaedic Surgery; Spine Unit, University Hospital Bern, Switzerland

QF68 MIDTERM CLINICAL RESULTS OF TEMPORARY SHORT-SEGMENT FIXATION WITHOUT AUGMENTATION FOR THORACOLUMBAR BURST FRACTURES
Tomoya Yamashita, Hiroyuki Aono, presented by Masayuki Furuya
Dept of Orthopaedic Surgery, Osaka, Japan
QF69 LONG-TERM FOLLOW-UP RESULTS IN PATIENTS WITH THORACOLUMBAR UNSTABLE BURST FRACTURE TREATED WITH TEMPORARY POSTERIOR INSTRUMENTATION WITHOUT FUSION AND IMPLANT REMOVAL SURGERY – FOLLOW-UP RESULTS FOR AT LEAST TEN YEARS
Sangbong Ko
Dept of Orthopaedic Surgery, Daegu, Korea

QF70 THE RADIOLOGICAL EVALUATION DOES NOT REFLECT THE CLINICAL OUTCOME AFTER SURGERY IN UNSTABLE THORACOLUMBAR AND LUMBAR TYPE A FRACTURES WITHOUT NEUROLOGICAL SYMPTOMS. A COMPARATIVE STUDY OF TWO COHORTS TREATED BY OPEN OR PERCUTANEOUS SURGERY
Alejandro Lorente-Gómez, Rafael Lorente-Moreno, Pablo Palacios-Cabezas, Bárbara Rosa, Carlos Barrios, Alexander Vaccaro
Hospital Ramón y Cajal, Madrid, Spain; Hospital Infanta Cristina, Badajoz, Spain; University Hospital Madrid Norte Sabchinarro, Madrid, Spain; Valencia Catholic University, Valencia, Spain

QF72 RADIOLOGICAL AND CLINICAL EVALUATION OF THE USE OF LOW AND HIGH DENSITY SCREW SYSTEMS IN SCHEUERMANN KYPHOSIS
Umit Ozgur Guler, Metin Ozalay, Alpaslan Senkoylu, Ismail Daldal, Murat Bezer, Akif Albayrak, Mustafa Celihtas, Mahir Gulsen, Akin Ugras, Serkan Erkan, Esat Kiter, Nusret Ok, Yetkin Soyuncu, Omer Akcali, Ali Asma, Anil M.Ozturk, Burak Akesen
Dept of Orthopedics & Traumatology, Adana, Turkey

QF73 3D VALIDATION OF THE NEW SAGITTAL CLASSIFICATION FOR AIS
Mareille Post, Stephane Verdun, Pierre Roussouly, Kariman Abelin-Genevois
Dept of Spine Surgery, Centre Medico Chirurgical des Massues Croix Rouge Francaise, Lyon, France; Dept of Medical Research, Institut Catholique de Lille, France

QF74 THE INFLUENCE OF OBESITY ON LOW BACK PAIN IN ELDERLY INDIVIDUALS CONSIDERATIONS BASED ON MEDICAL EXAMINATION OF LOCAL RESIDENTS: THE GAINA STUDY
Shinji Tanishima, Hiroshi Hagino, Hiromi Matsumoto, Hideki Nagashima
Dept of Orthopedic Surgery, Tottori-University, Japan

QF75 TIME FOR ONE MORE QUESTION? A SIMPLE "YELLOW FLAG" TOOL TO ASSESS PSYCHOLOGICAL FACTORS IN PATIENTS UNDERGOING SPINE SURGERY
Anne F. Mannion, Francine Mariaux, Tamas F Fekete, Daniel Haschtmann, Markus Loibl, Hans-Jürgen Burgstaller, Frank Kleinstück, François Porchet, Dezső Jeszenszky, Achim Elfering
Schulthess Klinik, Zürich, Switzerland

14:00 Degenerative Cervical Spine, Tumor, Patient Safety
Room 112
Chairs: Ulrich Hubbe, Freiburg, Germany
Sait Naderi, Istanbul, Turkey

QF76 DOES ADDITIONAL UNCINATE RESECTION INCREASE PSEUDARTHROSIS FOLLOWING ANTERIOR CERVICAL DISCECTOMY AND FUSION?
Jong-Min Baik, Deuk Soo Jun
Dept of Spine Surgery, Seoul, Korea
QF77 THE DISCREPANCY BETWEEN CLINICAL MEASURES AND SELF-REPORTED RATINGS OF HEALTH STATUS: AN INTRODUCTION TO RESPONSE SHIFT
Rachel Howard, Lindsay Tetreault, Mary Zhu, Michael Fehlings, Jefferson Wilson
Graduate Entry Medicine, University College Cork, Cork, Ireland

QF78 RELATED FACTORS OF NECK DISABILITY INDEX (NDI) AMONG ELDERLY PEOPLE IN SUBURBAN AREA: SHIRANISHI COHORT STUDY
Yusuke Hori, Masatoshi Hoshino, Shinji Takahashi, Shoichiro Ohyama, Tadao Tsujio, Akio Kobayashi, Hiroaki Nakamura
Dep of Orthopaedic Surgery, Osaka City University, Osaka, Japan

QF79 FACTORS AFFECTING OUTCOMES OF CERVICAL DOUBLE-DOOR LAMINOPLASY BY MIDSAGITTAL SPLITTING METHOD
Toshikatsu Mamada, Norihiko Nakata, Go Hayasaka
Dept. of Spine Surg., JCHO Tokyo Yamate Medical Center

QF80 INFLUENCE OF THE PARAMETERS OF THE LOCAL SAGITTAL BALANCE OF THE CERVICAL SPINE ON THE QUALITY OF LIFE OF PATIENTS OPERATED ON FOR KYPHOTIC DEFORMITIES OF THE CERVICAL SPINE
Vladimir Klimov, Vladislav Kelmakov, Aleksey Evsyukov, Evgeniy Loparev, Murodzhon Kosimshoev, Evgenia Amelina
The "Federal Center of Neurosurgery"

QF81 SURGICAL TREATMENT OF SEVERE RIGID CERVICAL KYPHOSIS BY POSTERIOR LATERAL OSTEOTOMY
Baoqie Liu, Wei Cui
Department of Orthopaedic Surgery, Beijing Tian Tan Hospital Capital Medical University, China

QF82 CAN WE DEFINE CLINICALLY RELEVANT DJK IN CERVICAL DEFORMITY SURGERY?
Themistocles Protopsaltis, Nicholas Stekas, Renaud Lafage, Justin Smith, Alex Soroceanu, Daniel Sciuabba, Koja Hamilton, Robert Eastlack, Greg Mundis, Khaled Kebaish, Eric Klineberg, Munish Gupta, Virginie Lafage, Robert Hart, Frank Schwab, Doug Burton, Shay Bess, Christopher Shawrey, Christopher Ames, ISSG
NYU Langone Medical Center, NYU Langone Orthopedic Hospital, New York, USA

QF83 DOES ADDITIONAL BONE GRAFTING OF ATLANTOAXIAL JOINT INCREASE THE BONE FUSION RATE OF I LIAC CREST AUTOGR AFT IN POSTERIOR OCCIPITO-CERVICAL FUSION? A RETROSPECTIVE, CONTROLLED STUDY WITH A 2-YEAR FOLLOW-UP
Jun-Song Yang, Tuan-Jiang Liu, Ding-Jun Hao
Honghui Hospital, Xi’an Jiaotong University

QF84 METASTATIC SPINE DISEASE AND CANCER WITH UNKNOWN PRIMARY – A SURVIVAL ANALYSIS
Christian Carrwik, Claes Olerud, Yohan Robinson
Department of Surgical Sciences / Section of Orthopaedics, Uppsala University, Sweden
QF85 RECONSTRUCTION OF CERVICAL CORPECTOMY DEFECT WITH EXPANDABLE IMPLANTS IN METASTASIC SPINE DISEASE. DO WE NEED POSTERIOR FIXATION?
Yasser El Mansy, Heinrich Böhm
RWTH University hospital of Aachen, Zentralklinik Bad Berka, Germany

QF86 PERIOPERATIVE COMPLICATIONS AND PROGNOSIS OF TOTAL EN BLOC SPONDYLECTOMY FOR SPINAL METASTASES IN ELDERLY PATIENTS
Noritaka Yonezawa, Hideki Murakami, Satoru Demura, Satoshi Kato, Katsuhito Yoshioka, Noriaki Yokogawa, Takaki Shimizu, Norihiro Oku, Ryo Kitagawa, Hirayuki Tsuchiya
Dept of Orthopaedic Surgery, Kanazawa University, Kanazawa, Japan

QF87 TOTAL EN BLOC SPONDYLECTOMY FOR PRIMARY TUMORS OF THE LUMBAR SPINE
Takaki Shimizu, Hideki Murakami, Satoru Demura, Satoshi Kato, Noriaki Yokogawa, Norihiro Oku, Ryo Kitagawa, Hiroyuki Tsuchiya
Dept of Orthopaedic Surgery, Kanazawa, Japan

QF88 ADVERSE EVENTS PROFILE IN EN BLOC RESECTION AND SURGERY FOR PRIMARY BONE TUMOR
Shreya Srinivas, Raphael Charest-Morin, Charles Fisher, Nicolas Dea
Combined Neuorsurgical and Orthopedic Program, Vancouver Spine Surgery, Vancouver, Canada

QF89 EFFECT OF TRANEXAMIC ACID FOR PERIOPERATIVE BLOOD LOSS IN DECOMPRESSION SPINE SURGERIES: A DOUBLE BLIND PROSPECTIVE RANDOMIZED CONTROLLED STUDY
Atsuki Sano, Tsuyoshi Sato
Dept of Orthopaedic Surgery, Shibata, Japan

QF90 SURGICAL TRAINING IN SPINE SURGERY: SAFETY AND PATIENT-RATED OUTCOME
Guy Waisbrod, Anne Mannion, Tamas Fekete, Dezso Jeszenszky, Frank Kleinstück, Daniel Haschtmann
Department of Spine Surgery, Schulthess Klinik, Zürich, Switzerland

15:20–15:50 COFFEE BREAK IN THE FOYER OF LEVEL 1

15:50–17:00 Complications, Infection, Epidemiology
Plenary Hall
Chairs: Joerg Franke, Magdeburg, Germany
Kostas Paterakis, Larissa, Greece

70 THE SHOULDER BALANCE REBUILDING IN SEVERE THORACIC SCOLIOSIS WITH A LOWER SHOULDER ON THE CONCAVE SIDE: EXPERIENCE FROM A SINGLE INSTITUTION INVOLVING 84 PVCR PATIENTS OVER 13 YEARS
Tao Li, Yingsong Wang, Jingming Xie, Ying Zhang, Zhi Zhao, Zhiyue Shi, Ni Bi
Department of Orthopedics, The 2nd Affiliated Hospital of Kunming Medical University, Yunnan Province, P.R.China
71 RECONSTRUCTION OF THE BASEMENT - RATHER THAN ADDING A STOREY IS MORE EFFECTIVE IN PREVENTING RE-PJK IN ADULT SPINAL DEFORMITY PATIENTS
Caglar Yilgor, Suna Iahut, Kadir Abul, Yasemin Yavuz, Firat Gulagaci, Ibrahim Obeid, Frank C. K. Kleinstuck, Francisco Javier Sanchez Perez-Grueso, Emre Acaroglu, Ferran Pellise, Ahmet Alanay, ESSG, European Spine Study Group
1Department of Orthopedics and Traumatology, Acıbadem Mehmet Ali Aydınlar University, Istanbul, Turkey; 2Comprehensive Spine Center, Acıbadem Maslak Hospital, Istanbul, Turkey; 3Department of Biostatistics, Ankara University, Ankara, Turkey; 4Spine Surgery Unit, Bordeaux University Hospital, Bordeaux, France; 5Spine Surgery Unit, Hospital Universitari Vall d’Hebron, Barcelona, Spain; 6Spine Center Division, Department of Orthopedics and Neurosurgery, Schulthess Klinik, Zurich, Switzerland; 7Spine Surgery Unit, Hospital Universitario La Paz, Madrid, Spain; 8Ankara ARTES Spine Center, Ankara, Turkey; 9Spine Center Division, Department of Research and Development, Schulthess Klinik, Zurich, Switzerland; 10Vall Hebron Institute of Research (VHIR) Barcelona-Spain

72 CLOSED DRAINAGE VERSUS NON-DRAINAGE FOR SINGLE-LEVEL LUMBAR DISCECTOMY: A PROSPECTIVE RANDOMIZED CONTROLLED STUDY
Dingjun Hao, Biao Wang
Department of Spine Surgery, Honghui Hospital, Xi’an Jiaotong University College of Medicine, Xi’an, China

73 COMPARING LUMBAR SPINAL FUSION PERIOPERATIVE MORBIDITY AND MORTALITY BY APPROACH UTILIZING THE NATIONAL INPATIENT SAMPLE (NIS): 2005-2013
Michael Faloon, Conor Dunn, Kimona Issa, Nikhil Sahai, Kumar Sinha, Ki Soo Hwang, Arash Emami
Seton Hall University, School of Medicine, Dept of Orthopaedic Surgery, Paterson, USA

74 LOW-GRADe INFECTION IN SPINAL INSTRUMENTATION: A PROSPECTIVE COMPARATIVE STUDY
Ehab Shiban, Mohammed Issa, Insa Janssen, Bernhard Meyer
Department of Neurosurgery, Technical University of Munich, Germany

75 DEEP SURGICAL INFECTION FOLLOWING INSTRUMENTED THORACOLUMBAR SURGERY. THE EXPERIENCE OF A QUARTER OF A CENTURY.
Borja De La Hera Cremades, Felisa Sánchez-Mariscal Díaz, Alejandro Gómez-Rice, Iria Carla Vázquez Vecilla, Lorenzo Zúñiga Gómez, Rafael Rubio Quevedo, Esther Ruano Soriano
Orthopaedic Surgery, Spinal Unit, Getafe University Hospital, Madrid, Spain

76 RESULTS OF PREOPERATIVE NASAL BACTERIAL CULTURE IN PATIENTS WHO UNDERWENT SPINAL INSTRUMENTATION SURGERY
Hirohito Takeuchi, Itaru Oda, Shigeki Oshima, Masaru Suzuki, Masanori Fujiya
Hokkaido Orthopedic Memorial Hospital, Sapporo, Japan

77 IMPACT OF ELECTROCAUTERY ON FATIGUE LIFE OF SPINAL FUSION-CONSTRUCTS - AN IN VITRO BIOMECHANICAL INVESTIGATION
Michael Akbar, Haidara Al Mansour, Wojciech Pepke, Robert Sonntag, Jan Philippe Kretzer
Spine Center, Department of Orthopedic Surgery and Spinal Cord Injury, Univeristy of Heidelberg, Heidelberg, Germany
PATIENTS HAVE GREATER EXPECTATIONS THAN SURGEONS HAVE FOR IMPROVEMENT IN PSYCHOLOGICAL WELL-BEING FROM LUMBAR SURGERY
Carol A. Mancuso, Roland Duculan, Frank P. Cammisa, Andrew A. Sama, Alexander P. Hughes, Darren R. Lebl, Federico P. Girardi
Dept of Orthopedics, Hospital for Special Surgery, New York, USA

17:00 ADJOURN – END
Registration & Congress Material

Registration opening times
Tuesday, 18 September  11:00–19:00
Wednesday, 19 September  07:30–18:00
Thursday, 20 September   08:00–18:00
Friday, 21 September  08:00–17:30

Service desks & self-print stations
Delegates will print their name badges at several self-print stations onsite by scanning a barcode that will be sent via email a few days before the conference. Our staff members will be happy to assist you in case of any problems.

Registration service desks are in place for participants with outstanding payments or any questions regarding registration. If you would like to amend your registration, please proceed to the service desk.

Exhibitors can pick up their name badges at the exhibition service desk which is also located in the registration area. Please note that there is no self-printing available for exhibitor name badges.

Tickets for the EUROSPINE 2018 Congress Evening at Café del Mar can be purchased and picked up at the networking events counter.

Please refer to the app helpdesk in case you have any questions concerning the EUROSPINE app.

Accommodation & Local Services Counter
Opening times
Tuesday, 18 September  11:00–19:00
Wednesday, 19 September  10:00–17:00
Thursday, 20 September   10:00–17:00
Friday, 21 September  10:00–14:00

Name Badges
Delegates will receive their name badge when collecting their congress documents. Please wear your name badge during all congress events, including the networking activities. Admission to scientific sessions is restricted to participants wearing their badges. Exhibitors are not entitled to attend the scientific sessions with the exception of their own company’s workshop.

Please note: Participants who misplace their badge need to pay for a new one.
How to read your name badge:

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COUNTRY / COMPANY

PC 1

Society member status or sponsor status
Country or company of participant
Barcode for CME credits/lead retrieval
ID/reference number of registration

Coloured bar for different congress badges (orange = day ticket; red = pre-course; grey = staff; yellow-green = exhibitor; dark blue = participant)
Shows the day of day ticket OR pre-day course number

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PRE-DAY COURSE

DAY TICKET

EXHIBITOR

STAFF

PRESS

Transfer of your data to exhibitors and sponsors
Please note: If you have your badge scanned by an exhibitor/sponsor at EUROSPINE 2018, you thereby agree that your personal data (consisting of name, contact data, address data & organisation/institute, professional specialisation), collected by Mondial Congress & Events, may be forwarded (via a contracted service provider) to the exhibitor/sponsor by whom you have your badge scanned, and the respective company may contact you directly for its own purposes.
Congress bags
Same as last year, EUROSPINE has decided to take a greener approach in 2018 and not produce any congress bags in order to save resources.

ESF Charity Run 2018
On Thursday, 20 September at 07:00 Team EUROSPINE will be running together for excellence in spine education and research.
Find out more: http://www.eurospinemeeting.org/eurospine-foundation-run-2018.htm

Time Capsule
We have taken this as an opportunity to look back at the early years, achievements that make us not only proud but also formed the society to what it is now, successful meetings and events, as well as relationships between colleagues that have grown to great friendships and are also part of what gives EUROSPINE its familial flair. Come and see EUROSPINE’s Time Capsule in the entrance area and be in for a surprise according to the motto “Cheers to 20 years!”.

20th Anniversary Photo Challenge
Everybody was invited to send pictures from their first EUROSPINE experiences. The prize-winning photographs are assembled into a huge picture mosaic and will be seen in EUROSPINE’s Time Capsule in the entrance area. The three winners of the challenge will be announced during the Welcome Reception at the EUROSPINE booth.

#HASHTAGPRINTER & Selfie Wall
Posting a photo on Instagram or Twitter is all good and well, but don’t you sometimes wish you could take your photos home with you as a good, old-fashioned Polaroid? Now you can have the best of both worlds! Tag your photo with the hashtags #EUROSPINE2018 or #EUROSPINE20TH and pick it up from our #hashtagprinter, located at the EUROSPINE Booth. All photos tagged with #EUROSPINE20TH or #EUROSPINE2018 on Twitter and public Instagram profiles will be printed automatically – no matter where you took them.
Catering onsite
Coffee, tea and snacks will be served in the exhibition hall between 10:00–10:30 as well as 15:20–15:50.

Between 12:00–14:00, EUROSPINE Lunch Symposia and Industry Lunch Workshops take place, where food and drinks will be offered to the participants. During exhibition times, coffee, refreshments, small snacks and tapas can be purchased at the cash catering station inside the exhibition hall. Please note that only credit card payments are accepted.

Please note that food and drinks are not allowed in the Plenary Hall.

Cloakroom
A cloakroom is available in the entrance area of the CCIB and is free of charge.

EUROSPINE Booth and Members’ Lounge
All members are invited to retreat and meet colleagues and friends in the EUROSPINE Members’ Lounge, located at the EUROSPINE booth. Just show your name badge with the member seal on it and step in.

Opening hours:
Wednesday, 19 September 08:00–18:30
Thursday, 20 September 08:00–17:00
Friday, 21 September 08:00–14:00

Exhibition opening hours:
Wednesday, 19 September 08:00–18:30
Thursday, 20 September 08:00–17:00
Friday, 21 September 08:00–14:00

First Aid
The fixed first aid room (nursery) is located on -M1 Level, half a floor down from the entrance area, left hand side of column C.

Free WiFi is accessible throughout the congress venue, except for the meeting rooms in Level M2.
SSID: EUROSPINE
No password required
The Spine Village is located in the foyer of level 1.

The following societies are represented at the Spine Village:

**EuSSAB Members**

- Turkish Spine Society S1
- German Spine Society (DWG) S2
- Israel Spine Society S3
- Spanish Spine Society - Sociedad Espanola de Columna Vertebral (GEER) S4
- United Kingdom Spine Societies Board (UKSSB) S5
- Russian Association of Spine Surgeons S6
- Société Francaise de Chirurgie Rachidienne (SFCR) S7
- Italian Spine Society (SICV&GIS) S8
- Hellenic Spine Society S13

**Others**

- NASS – North American Spine Society S9
- ON Foundation S10
- European Spine Journal (ESJ) & Open Operating Theatre (OOT) S11
- IGASS – International Group for Advancement in Spinal Science S12
CONTROL LORDOSIS

FIND THE PERFECT BALANCE

Globus offers expandable lateral interbody spacers with up to 30° of in situ lordosis adjustment designed to help optimize fit, maximize correction, and restore sagittal balance.

Visit Us at: Booth #20

15 YEARS OF CLINICAL EXCELLENCE

Visit GlobusMedical.com/LLIF
Industry Workshops
### Overview Industry Workshops

**Wednesday, 19 September | 12:00–14:00**

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**Thursday, 20 September | 12:00–14:00**

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**Friday, 21 September | 12:00–14:00**

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p. 70 p. 70
Next-Generation Navigation

Intracs® em

Easy and intuitive workflow

Instrument navigation directly at the tip

Navigation of Needle and Reamer

Navigation of the Endoscope

Endoscope Navigation (1+2 View)

Visit us and meet the experts at booth 05A  www.joimax.com
Wednesday, 19 September

12:00–14:00

Lunch Workshops

Medtronic
Meeting Room 113

Enhancing degenerative spine surgery – improving outcomes for you, your hospital and your patient

Improving Hospital Efficiencies and Patient Satisfaction – my Experience
Richard Assaker, France

New Technologies. A Costly Expense or a Way to Improve Outcomes
Pablo Clavel, Spain

Degenerative Cases with Demanding Patient Conditions – What are my Solutions?
Ian Harding, UK

Globus Medical, Inc.
Meeting Room 118+119

Workshop Topic: REFLECT®, A Non-Fusion Technique for Adolescent Idiopathic Scoliosis

Workshop Featured Technology: REFLECT®

Moderator: Randal Betz, USA

Speakers: Darryl Antonacci, USA
Juan Carlos Rodriguez Olaverri, Spain

Johnson & Johnson Medical Devices Companies
Meeting Room 120+121

Driving OR efficiencies with novel MIS TLIF techniques and enabling technologies

Unmet needs for MIS TLIF procedures, current inefficiencies
C. Thomé, Austria

OR efficiencies with novel MIS TLIF techniques
L. Proietti, Italy

Clinical case presentations
A. Parjon, Spain
ZIMMER BIOMET
Meeting Room 132

Arguments for cervical fusion vs Arguments for cervical arthroplasty
Let’s debate.
Jörg Franke, Germany
Jacques Beaurain, France

Misonix, Inc.
Meeting Room 129

Silony Medical Europe GmbH
Meeting Room 131

Pseudarthrosis. Risk factors and strategies of avoidance
Risk factors
Alexander Montgomery, UK

Strategies for the lumbosacral region
Ulf Liljenqvist, Germany

Strategies for complex osteotomies
Henry Halm, Germany

Strategies in osteoporotic patients
Alexander Montgomery, UK

ZEISS
Meeting Room 130

Initial experience with a novel Visualization System from ZEISS in minimally invasive spine surgery
Andreas Korge, Germany
On September 19th, 2018 our lunchtime workshop will take place in room 131 with the topic „Pseudarthrosis. Risk factors and strategies of avoidance“ and on September 20th, 2018 another lunchtime workshop on the subject „Exact surgical planning in adult deformity. Already winning more than half the battle?“.

Further information is available on our booth 26C - feel free to contact us!
Thursday, 20 September

12:00–14:00 Lunch Workshops

**Medtronic**
Meeting Room 113

**Challenging complications in deformity – treatment, prevention and driving safer surgery**
How to recognize patients at risk for PJK? Treatment strategies and how to address when failure occurs
*Andrew James Bowey, UK*

Real life surgical dilemmas: Pearls to react quickly and minimize complications (case presentations)
*TBC*

How is robotics making deformity surgery safer?
*Harel Arzi, Israel*

Q&A

**NuVasive**
Meeting Room 118+119

**Controversies in Sagittal Alignment**
Is there a relationship between Adjacent Segment Disease (ASD) and Sagittal Alignment?

*Claudio Lamartina, Italy*  
*Dominique Rothenfluh, UK*  
*Martin Gehrchen, Denmark*

ASD is a common complication of lumbar spinal fusion surgery, despite solid fusion at the treated level(s). Spinal fusion at the index level seems to create compensatory increases in motion at adjacent level. Multiple factors could cause ASD, however the importance of spinopelvic sagittal alignment is not well understood.

During this session you will learn:
- If and How alignment is associated with ASD
- Diagnostic value of sagittal parameters for ASD
- Practical tips and tricks to reduce ASD
- Considerations for adolescent patients
Industry Workshops

B. Braun
Meeting Room 120+121

LUNCH SYMPOSIUM ENNOVATE®
TREATMENT CASCADES AND COMPLICATION MANAGEMENT IN PATIENTS AFFECTED WITH OSTEOPOROSIS

Welcome & Introduction
Wolfgang Daiber, Germany

Holistic treatment of osteoporosis – Pros & cons for a combined implant- & drug treatment? – Is there a benefit for patient outcome?
Thomas Blattert, Germany

Intra- and postoperative complication management – How to decide and how to treat.
Michael Rauschmann, Germany

The best solution for your patient – Which therapy and approach is the most appropriate?
Mohd Hisam Muhamad Ariffin

Zimmer Biomet
Meeting Room 132

Oblique Lateral Preposas Interbody Fusion. Lateral made safe, quick and simple.
Joël Delécrin, France
Marc Szadkowski, France

joimax®
Meeting Room 122+123

Endoscopic Spine Surgery: Established Applications and New Techniques

Transforaminal endoscopic approach – my experience and evolution
Daniel Laich, USA

Transforaminal endoscopic surgery in LDH and my adoption rate
Frank Hassel, Germany

When do I use the transforaminal or the interlaminar endoscopic technique
Erik Traupe, Germany

My experience in endoscopic treatment of lumbar and cervical stenosis
Ralf Wagner, Germany

How I treat the facet joint pain – indications and own experience
Stefano Meloncelli, Italy

SIJ pain treatment – my experience and first study
Richard Ibrahim, Germany
Philips Healthcare
Meeting Room 129

Advanced imaging in spine: “Step into the new dimension of spine surgery”

Experience with the Hybrid OR in spine/ Advantages of an Hybrid OR during spine surgery
Sebastian Lippross, Germany

First clinical experiences with new Augmented Reality Surgical Navigation technology in scoliotic patients
Erik Edstrom, Sweden

RIWOspine
Meeting Room 130

The Concept of Full-endoscopic Spine Surgery – State of the Art and Latest Developments

Full-endoscopic interlaminar and trans-/extraforaminal surgery of lumbar disk herniations – Technique and indications
Sebastian Ruetten, Germany

Full-endoscopic decompression of lateral and central spinal stenosis
Christoph Siepe, Germany

Development and experiences in full-endoscopic spine surgery from Spain – Case presentations
Ghassan Elgeadi, Spain

Advanced techniques in full-endoscopic spine surgery at the cervical and thoracic spine
Sebastian Ruetten, Germany

Discussion

Safe Orthopaedics
Meeting Room 128

Spinal fracture treatment: challenges & solutions

Jean-Charles Le Huec, France
Steven Van Gaalen, The Netherlands
Andreas Demetriades, Scotland
Silony Medical Europe GmbH
Meeting Room 131

Exact surgical planning in adult deformity. Already winning more than half the battle?

Basics of sagittal balance in surgical planning
Markus Quante, Germany

MIS in Degenerative Deformities – Possibilities and Limitations
Motasem A. Al Maaieh, USA

Coronal plane correction and coronal balance with special regard to fusions to the pelvis
Pablo Clavel, Spain

Avoiding “topping off”
Henry Halm, Germany

Stryker
Meeting Room 127

Advances in degenerative scoliosis techniques utilising porous metal interbody cages

Segmental correction with 360 degrees multilevel spinal column release –
A step towards achieving consistent and reproducible results in degenerative scoliosis surgery.
Saeed Mohammad, UK
Silviu Sabou, UK

Bony in-growth potential of 3D-printed porous titanium alloy: a direct comparison of interbody cage materials in an in vivo ovine lumbar fusion model.
Joerg Kintscher, Germany
Oxiplex® Adhesion Barrier for Spine Surgery helps reduce the incidence, extent, and severity of postoperative adhesions from spine surgery. Oxiplex is a clear, single-use, flowable gel intended to serve as a temporary, absorbable mechanical barrier separating surgically traumatized neural tissues where adhesions could potentially form.

Visit FzioMed at booth #37E to learn more.
Friday, 21 September

12:00–14:00  Lunch Workshops

**Medtronic**
Meeting Room 113

**How is innovation improving the continuum of care in trauma and tumor treatment**

Advancement in Spinal Trauma Treatment – What can we achieve today?
*Sebastiaan Schelfaut, Belgium*

Controversial Cases in Trauma? How do I handle them?
*Matti Scholz, Germany*

Finding the most appropriate treatment for Metastatic Spine Tumors.
*Hanny Anwar, UK*

**Johnson & Johnson Medical Devices Companies**
Meeting Room 120+121

**Junctional kyphosis in the Adult Spine**

Vogtareuth-Proximal and Distal Junctional Kyphosis in the Cervical Spine
*H. Koller, Germany*

Fragility fractures: time to act now
*C. Coppola, Italy*

Proximal and Distal Junctional Kyphosis in the Thoracolumbar Spine: Current challenges and solutions
*F. Kleinstueck, Switzerland*
Our 3D spine solution, based on CT images, allows you and your team to plan cases involving pedicle screws more efficiently. The solution considers each pedicles’ unique anatomy when determining placement and sizing of individual screws. The result? Fewer surprises, less stress — and consequently, less time spent in the operating room. For more info on how to improve patient outcomes by increasing efficiency in the operating room, visit us at EUROSPINE or www.sectra.com/ortho. You can also contact us directly at info.ortho@sectra.com.
Meet the Expert

Some companies are organising small “Meet-the-Expert” gatherings at their exhibition booth during coffee breaks and/or the welcome reception. More details can be found below.

**EOS imaging booth 26**

Expert: Jean-Charles Le Huec, France  
Title: EOS solutions for improving spine treatment outcomes  
Thursday, 20 September Coffee Break 10:00-10:30  
Friday, 21 September Coffee Break 10:00-10:30

**joimax® booth 05A**

Topic: Endoscopic spine procedures  
Expert: Ralf Wagner, Germany  
Wednesday, 19 September Coffee Break 10:00-10:30

Expert: Stefano Meloncelli, Italy  
Thursday, 20 September Coffee Break 15:20-15:50

**Spineway booth 01A**

Expert: Thierry Marnay, France  
Topic: Frontal and sagittal balance optimization after preop CT Guided implantation of screws in deformities surgical treatment. About 120 cases.  
Wednesday, 19 September Coffee Break 15:20-15:50  
Thursday, 20 September Coffee Break 10:00-10:30

Expert: Gilles Norotte, France  
Topic: A standalone ALIF in elderly population: the Pendulum Concept vs. Spinopelvic Parameters.  
Wednesday, 19 September Coffee Break 10:00-10:30  
Thursday, 20 September Coffee Break 15:20-15:50

**ZEISS booth 05B**

Expert: Andreas Korge, Germany  
Title: Initial experience with an innovative Visualization System from ZEISS in minimally invasive spine surgery  
Wednesday, 19 September Welcome Reception 17:45-18:15  
Thursday, 20 September Coffee Break 10:00-10:30
Join us at the booth 06

Mobile Core Technology™
Cervical Disc Prosthesis

Spinous Process Fixation Devices

Aspen®
MIS Fusion System

Alpine XC™
Adjustable MIS Fusion System

Polaris™ 4.75
Deformity System

Thoracolumbar solutions
Venue Floor Plan

Level 0

- Cloakroom
- Time Capsule
- Cash Catering
- Elevators
- Toilets

Level 1

- Plenary Hall
- Break-out Rooms
- Spine Village
- Exhibitor Lounge

Level 2: Hospitality & business meeting rooms

- Speakers’ Preview Centre
- E-posters
- EUROSPINE Booth
- Entrance & Registration

Floor Plans
### Spine Village Floor Plan

**Foyer Level 1**

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- Dymicron EU GmbH
- Synergy Disc Replacement Ltd
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Interbody Fusion Outcomes may be Improved with PEEK-OPTIMA™ Polymers

CERVICAL FUSION OUTCOMES

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<td>FUSION RATE**</td>
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<td>16-20%</td>
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Higher fusion, lower subsidence rates with PEEK-OPTIMA Natural compared to Titanium

For a full non-metal solution for bone ongrowth, PEEK-OPTIMA HA Enhanced is fully integrated, not coated, with Hydroxyapatite (HA).

Early clinical results for cervical and lumbar fusion indicate potential patient benefits and reveal specific improvements:*  
- Solid fusions as early as 6 months  
- Dense bone apposition at the bone-implant interface  
- Positive clinical outcomes at early time points  
- Improvements in overall pain & neurological function

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* Based on radiographic outcomes.  
* Testimonials presented have been provided by practicing orthopedic surgeons. Their views and experiences are their own and do not necessarily reflect those of others. Invibio disclaims any liability or loss in connection with the information herein.

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universal OCT spinal stabilization

uCentum™
comprehensive posterior system

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Permanent innovations in spinal surgery demand continuous documentation assessing the efficiency, safety and cost-effectiveness of the new techniques and technologies.

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The growing number of Spine Tango participants indicates the success of the system that has always been a non-commercial academic project.

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and in Collaboration with the Scoliosis Research Society (SRS)

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