

ACA/CA - AUSTRALIAN CHIROPRACTORS ASSOCIATION
 AND CHIROPRACTIC AUSTRALIA
Session 1

Chair: President CA

08.10		Opening Remarks
08.20	O586	Reassurance for low back pain in primary care: A scoping review Young A. (AU)
08.30	O587	What are medical attitudes and inclinations towards chiropractic? A universal review of the literature Taylor B. (AU)
08.40		Question time
08.50		Lecture: SPINE and SPORT - Spine Health over time Dvorák J. (CH)
09.20		Lecture: Physical activity promotion in chiropractic Fernandez M. (AU)
09.50		Discussion
10.00		Coffee Break
		Session 2
		Chair: Fernandez M. (AU)
10.30	O588	Does sedentary behaviour cause spinal pain in children and adolescents? A systematic review with meta-analysis Montgomery M. (AU)
10.40	O589	Reassurance for low back pain in primary care: A qualitative study Young A. (AU)
10.50	O590	Investigation of the factors influencing spinal manipulative therapy force transmission through the thorax: A cadaveric study Funabashi M. (CA)
11.00	O591	Young patients and chiropractors' observation and analysis study (Young COAST): A feasibility study Beynon A. (AU)
11.10		Question time
11.20		Lecture: Trajectories of back pain in young populations Beynon A. (AU)
11.50		Lecture: Neuromechanical mechanisms of spinal dysfunction and the silver bullet: A search for the holy grail Colloca C. (US)
12.20		Discussion
12.30		Lunch Break & Industry Workshops

 ACA/CA - AUSTRALIAN CHIROPRACTORS ASSOCIATION
 AND CHIROPRACTIC AUSTRALIA
Session 3

Chair: Swain M. (AU)

14.00		Opening Remarks
14.10	O592	Physical activity promotion among Australian chiropractors: What are we doing or not doing? Results from a cross-sectional survey Fernandez M. (AU)
14.20	O593	Reliability of the biomechanical assessment of the sagittal lumbar spine and pelvis on radiographs used in clinical practice: Design of a systematic review of the literature Betz J. (US)
14.30	O594	Evaluating test-retest reliability of the flexion-relaxation ratio within and between days Howarth S. (CA)
14.40		Question time
14.50		Lecture: Are the forces in SMT safe? Funabashi M. (CA)
15.20		Lecture Wong A. (HK)
15.50		Discussion
16.00		Coffee Break
		Session 4
		Chair: President ACA/CA
16.30		Opening Remarks
16.40		Lecture: Conservative interventions for Adolescent Idiopathic Scoliosis Brown B. (AU)
17.10		Lecture: Spinal pain in adolescents Swain M. (AU)
17.40		Awards/Announcements and Closing Remarks
18.00		Adjourn

Symposium: AOGO: AOSpine Guideline for using osteobiologics in spinal degenerative cases (AO-GO)

An AO Spine Knowledge Forum Degenerative Project

Chairs: Sakai D. (JP) & Levayer M. (AU)

- 08.00 AOGO the focus and vision
Meisel H.J. (DE)
- 08.05 Use of autograft and allograft in ACDF
Vadala G. (IT)
- 08.15 Cage alone new frontiers
Diwan A. (AU)
- 08.25 What evidence do we lack
Buser Z. (US)
- 08.35 Discussion
- Free Paper Session III: Cervical**
Chairs: Sakai D. (JP) & Mohapatra B. (IN) & Stewart S. (AU)

08.40 O595 Prospective randomized control trial to compare the role of injection Cerebrolysin for 10 days duration against placebo in operated cases of degenerative cervical myelopathy
Sharma A. (IN)

08.48 O596 The risk of getting worse after surgery for cervical myelopathy - A population-based study of 1097 patients
Danielsen E. (NO)

08.56 O597 Managing risk in degenerative cervical myelopathy: A service review in response to Covid-19 delays
Dunstan E. (NO)

09.04 O598 Prognostic factors for cervical spinal cord injury without major bone injury in elderly patients: Multicenter study in Japan
Nakajima H. (JP)

09.12 CUTE (Catch-Up-Time)

09.28 O599 Clinico-radiological risk factors associated with inability to achieve minimum clinically important difference in operated cases of cervical spondylotic myelopathy
Acharya S. (IN)

09.36 O600 A prospective randomized controlled multicentre study of ProDisc-C vs anterior cervical discectomy and fusion for treatment of symptomatic cervical disc disease in Asian population: A 4-year outcome
Kumar N. (SG)

09.44 O601 Long term clinical and radiological outcomes of cervical disc arthroplasty at a tertiary level spine center: A retrospective cohort analysis with minimum 2 years of follow up
Dave B. (IN)

09.52 O602 Treatment strategy for lateral atlantoaxial osteoarthritis
Son H.J. (KR)

10.00 **Coffee Break**

Symposium: AO SAUNZ Research

Chair: Sheidrick K. (AU)

Rapporteur: Chopra N. (AU)

Introduction

- 10.30 Myelopathy natural history a registry - The MYNAH Study
Najib N. (AU)
- 10.35 Disc on a chip
Tavakoli J. (AU)
- 10.41 Decay bariance is a clinical marker for disc degeneration
Sheidrick K. (AU)
- 10.53 Microbiome and surgical outcomes
Chopra N. (AU)
- 10.59 Dental pulp stem cells following acute spinal cord injury
O'Hare Daig R. (AU)

Free Paper Session IV: Trauma & Tumors

Chairs: Kundnani V. (IN) & Sheidrick K. (AU)

Rapporteur: Koremans F. (AU)

11.10 O603 The AO Spine thoracolumbar injury classification system and treatment algorithm in decision making for thoracolumbar burst fractures without neurologic deficit
Kweh B. (AU)

11.18 O604 Percutaneous pedicle screw fixation without arthrodesis of 368 thoracolumbar fractures: Long-term clinical and radiological outcomes in a single institution
Racco A. (IT)

11.26 O605 Genesis and evolution of the AO spine sacral and pelvis classification system: A systematic review
Kweh B. (AU)

11.34 O606 Long-term follow-up after vertebroplasty – A prospective 10-years control study
Berlemann U. (CH)

11.42 O607 Increased incidence of traumatic spine injury in elderly patients in the Netherlands
Ruijges J. (NL)

11.50 CUTE (Catch-Up-Time)

11.58 O608 Complications and risk factors in en bloc resection of spinal tumors: A retrospective analysis on 298 patients treated in a single institution
Marfikos K. (IT)

12.06 O610 Surgical treatment of spinal meningiomas in the elderly (75 years): Which factors affect the neurological outcome? An international multicentric study of 72 cases
Barrey C. (FR)

12.14 O611 Deep learning model for grading metastatic epidural spinal cord compression on staging CT
Kumar N. (SG)

12.30 **Lunch Break & Industry Workshops**

AOSPINE

**Initiatives - A Workshop for Asia Pacific
Workshop on Developing Degepro Clinical Research Platform for Asia**
Chair: Diwan A. (AU)

- 14.00 Introduction
Diwan A. (AU), Workshop Coordinator
- 14.05 Panel discussion for existing, future and desiring surgeons to be part of Degen Pro Prospective trails
Free Paper session V: Tech
Chairs: Diwan A. (AU) & Malham G. (AU)
- 14.40 O612 Can the baseline clinical status and surgical strategy influence early good to excellent results in spinal lumbar fusion? A machine learning approach
Befano P. (IT)
- 14.48 O613 Can the addition of robotic terminal cleaning via pulsed-xenon ultraviolet light reduce bioburden in the operating room compared to traditional manual methods alone?
Nasr'A. (US)
- 14.56 O614 Integrating 2D radiographs and 1D clinical data in the AI prediction of adolescent idiopathic scoliosis progression
Cheung J.P.Y. (HK)
- 15.04 O615 Application of modest hypothermia in patients with acute traumatic cervical spine injury: A pilot study
Ankit R. (IN)
- 15.12 CUTE (Catch-Up-Time)
- 15.20 O617 Power-assisted pedicle screw placement decreases pedicle screw wobble
Permeswaran V. (US)
- 15.28 O618 Proposed objective scoring algorithm for clinical evaluation of walking asymmetry in lumbar disc herniation, based on relevant gait metrics from wearable devices: The Gait Symmetry Index (GSIM) – Observational study
Natarajan P. (AU)
- 15.36 O619 Evaluation of an Artificial Intelligence (AI) based scoliosis measurement program
Wang M. (DK)
- 15.44 O620 Safe exposure of the lumbosacral plexus via the pararectal approach: A technical note on this novel technique
Häckel S. (CH)
- 16.00 **Coffee Break**
Free Paper Session VI
Chair: Hsu B. (AU)
Rapporteur: Bohra H. (AU)
- 16.30 Introduction
- 16.35 O621 Clinical experience with occipital-cervical fixation in hypermobile patients
Timothy J. (GB)

AOSPINE

- 16.43 O622 Risk factors of global spinal mal-alignment after osteoporotic vertebral fracture
Iwata A. (JP)
- 16.51 O623 Scoliosis among children in Qinghai-Tibetan Plateau of China - A cross-sectional epidemiological study
HaiY. (CN)
- 16.59 CUTE (Catch-Up-Time)
- 17.07 O624 Developing a spine surgery training curriculum using entrustable professional activities
Ashman B. (AU)
- 17.15 O625 Power-assisted versus manual pedicle screw tract preparation: Safe use and proprioception
Permeswaran V.N. (US)
- 17.23 O626 A summary of development, methods used and results from NORSpine – The Norwegian national quality registry for spine surgery
Mikkelsen E. (NO)
- 17.31 CUTE (Catch-Up-Time)
- 17.39 O627 Complications in spinal surgery: An unsolved problem... possible solutions
Martikos K. (IT)
- 17.47 O628 'Holding them back': Is Posterior C2-3 fusion, a more rational way to realign unstable Hangman's fracture?
Mahdavian K. (IN)
- 17.55 O630 Is BESS (biportal endoscopic spinal surgery) an efficient method for cervical disc herniation treatment?
Kim C.K. (KR)
- 18.03 CUTE (Catch-Up-Time)
- 18.19 **Adjourn**



**BSS/SILACO - SOCIEDAD IBERO LATINOAMERICANA DE COLUMNA AUSTRALIA
AND SOCIEDADE BRASILEIRA DE COLUNA**

Session 1: Cervical spine spondilotic myelopathy

Chairs: *Alves J. (PT) & Menezes C.M. (BR)*

08.00	Welcome <i>Alves J. (PT)</i>
08.02	Speakers presentation <i>Menezes C.M. (BR)</i>
08.04	Surgical anterior approach <i>Maizac A. (BR)</i>
08.16	Surgical posterior approach <i>Yurac R. (CL)</i>
08.28	Complications in cervical spondilotic myelopathy surgery <i>Moyano J. (EC)</i>
08.40	Q&A Session

Session 2: Cervical spine spondilotic myelopathy – Case presentation

Chairs: *Menezes C.M. (BR) & Yurac R. (CL)*

09.00	Welcome <i>Menezes C.M. (BR)</i>
09.03	Speakers presentation <i>Yurac R. (CL)</i>
09.06	Case 1: Rheumatic cervical spine <i>Alves J. (PT)</i>
09.24	Case 2: Posterior approach <i>Maizac A. (BR)</i>
09.42	Case 3: Spondylitis – T2 FSO <i>Fogaça Cristante A. (BR)</i>
10.00	Coffee Break



**BSS/SILACO - SOCIEDAD IBERO LATINOAMERICANA DE COLUMNA AUSTRALIA
AND SOCIEDADE BRASILEIRA DE COLUNA**

Session 3: Lumbar spine degenerative
Chairs: *Fogaça Cristante A. (BR) & Moyano J. (EC)*

10.30	Welcome <i>Fogaça Cristante A. (BR)</i>
10.32	Speakers presentation <i>Moyano J. (EC)</i>
10.34	Lateral approach <i>Menezes C.M. (BR)</i>
10.46	Posterior approach <i>Fogaça Cristante A. (BR)</i>
10.58	Adjacent segment diseases <i>Alves J. (PT)</i>
11.10	Q&A Session

Session 4: Adult scoliosis
Chairs: *Yurac R. (CL), Fogaça Cristante A.F. (BR)*

11.30	Welcome <i>Yurac R. (CL)</i>
11.32	Speakers presentation <i>Fogaça Cristante A. (BR)</i>
11.34	Diagnosis and surgical considerations <i>Moyano J. (EC)</i>
11.46	PJK <i>Risso M. (BR)</i>
11.58	Fragility patients evaluation and complication's prevention <i>Alves J. (PT)</i>
12.10	Q&A Session
12.30	Lunch Break & Industry Workshops



SIS - SPINE INTERVENTION SOCIETY

Session 8: Cervicogenic headaches: The role of injections and surgery
Chair: Sibell D.M. (US)

08:30	Diagnosis of cervicogenic headache Bogduk N. (AU)
08:45	Third occipital nerve radiofrequency neurotomy MacVicar J. (NZ)
09:00	Suboccipital joints injection Wright R.E. (AU)
09:15	A spine surgeon's role in treating cervicogenic headache Alamin T. (US)
09:30	Neuromodulation for headache Verrills P. (AU)
09:45	Discussion
10:00	Coffee Break



SIS - SPINE INTERVENTION SOCIETY

Session 9: Emerging minimally invasive spine interventions
Chair: Kennedy D.J. (US)

10:30	Intradiscal platelet-rich plasma Wright R.E. (AU)
10:50	Stem cells Bates D. (AU)
11:10	Ultrasound guidance Stauf A. (US)
11:30	Basivertebral nerve ablation Smuck M. (US)
11:50	High frequency focused ultrasound Shah V. (US)
12:10	Discussion
12:30	Adjourn



SOCIETY FOR MINIMALLY INVASIVE SPINE SURGERY

Session 5: Spine Endoscopy #2

Chairs: Hegde S. (IN) & Cheung P. (HK)

- 08.00 O631 Performance of artificial intelligence-based algorithms to predict prolonged length of stay after lumbar decompression surgery
Haseif F. (DE)
- 08.12 O632 Endoscopic revision surgery after sacroiliac joint fusion
Wagner R. (DE)
- 08.24 The caveats of endoscopic lumbar interbody fusions
Kim L. (US)
- 08.39 O633 Biportal endoscopic decompression of ossification flavum ligament - Is it enough to improve the clinical outcome?
Gatam A.R. (ID)
- 08.51 Transforminimal endoscopic approach to the thoracic spine - Complex indication beyond soft disc herniation
Bae J.S. (KR)
- 09.06 O634 Full-Endoscopic Lumbar Discectomy (FELD) reaches non-inferior clinical improvement as standard surgery for lumbar disc herniations measured by Minimal Important Change (MIC) and Patient Acceptable Symptom State (PASS) in Leg pain (NRS) and Oswestry Disability Index (ODI)
Beck P.J.M. (SE)
- 09.18 O635 Comparative analysis of full endoscopic anterior and posterior cervical approaches in the management of cervical intervertebral disc herniation - A retrospective evaluation of clinical and radiological outcomes
Choi Y.S. (KR)
- 09.30 O636 Usefulness of percutaneous correction with LIF and ALL PPS for severe adult spinal deformity
Harada T. (JP)
- 09.42 Prognosis of iatrogenic neural injury of endoscopic surgery of the lumbar spine
Hai Y. (CN)
- 09.57 O637 Innovative percutaneous endoscopic transforminimal lumbar interbody fusion of lumbar spinal stenosis with degenerative instability: A non-randomized clinical trial
Yin P. (CN)
- 10.10 **Coffee Break**
- 10.30 **Session 6: MIS Deformity**
Chair: Yip R. (HK) & Hynes R. (US)
- 10.45 O638 Ace of the base or unnecessary internal decoration
Selby M. (AU)
- 10.45 O638 Position of the major vessels – Prone versus lateral
Pimenta L. (BR)
- 10.55 O639 Comparison of clinical outcome and radiologic parameters between OUIF51 and L5/S1 TUIF in adult spinal deformity correction surgery
Kotani Y. (JP)
- 11.05 O640 Does the use of porous printed titanium cages in lateral lumbar interbody fusion surgery lead to less cage subsidence? A retrospective age-, gender- and level-of-surgery-matched case control analysis
Lee B.H. (SG)



SOCIETY FOR MINIMALLY INVASIVE SPINE SURGERY

- 11.15 O641 Residual exposed endplate effect on heterotopic ossification after cervical baguera C disc arthroplasty
Chung K.C. (TW)
- Mini-debate (Case presentations)**
- 11.25 **Case 1: ATP**
Liang H. (CN)
- 11.35 **Case 2: PTP**
Oh J. (SG)
- 11.45 **Case 3: Lat ALIF**
Sarisratha P. (TH)
- 12.00 **Lunch Break & Industry Workshops**
- Session 7: Complications management**
Chairs: Kwon B. (US) & Tanaka M. (JP)
- 14.00 Analysis of surgical complication in OUIF51 and MIS deformity surgery
Kotani Y. (JP)
- 14.15 O642 Does UIV level influence the development of PJK/PJF in patients undergoing Circumferential Minimally Invasive Surgery (CMIS) for Adult Spinal Deformity (ASD)? - A 13-year analysis with minimum 2-year follow-up
Anand N. (US)
- 14.25 O643 Autologous Platelet Rich Fibrin (aPRF) as a novel multilayer sealant for persistent cerebrospinal fluid leaks in spinal surgery
Hubbe U. (DE)
- 14.35 O644 Management of incidental durotomies in an integrated orthopedic and neurosurgical spinal unit
Rodriguez-Rubio D. (ES)
- 14.45 **Dural tear management in MIS surgery**
Ryu S. (US)
- 15.00 **Haemostasis in spine surgery**
Soh R. (SG)
- 15.15 O645 Does the severity of facet arthropathy limit the sagittal re-alignment in circumferential minimally invasive surgical correction of adult spinal deformity?
Anand N. (US)
- 15.25 O646 A prospective multicentric study of controlled thermal energy and rotational capsular tissue shaving system in patients with facet joint syndrome
Atter M. (GB) & Kapoor V. (GB)
- 15.35 O647 Endoscopic approach in spondylodiscitis
Sharma A. (IN)
- 15.45 **Discussion**
- 16.00 **Coffee Break**



SOCIETY FOR MINIMALLY INVASIVE SPINE SURGERY

Session 8: Future of spine

Chairs: Phillips F. (US) & Hai Y. (CN)

- 16.30 O648 **Enhanced recovery after an innovative percutaneous endoscopic transforaminal lumbar interbody fusion for the treatment of lumbar spinal stenosis: A prospective observational study**
Yin P. (CN)
- 16.40 O649 **The application of artificial intelligence and custom algorithms with inertial wearable devices for gait analysis and detection of gait-altering pathologies in adults: A scoping review of literature**
Pannu M. (AU)
- 16.50 O650 **Ligamentum flavum sparing Unilateral Surgical technique and clinical results**
Kwon W.K. (KR)
- 17.00 **Discussion**
- 17.10 **Neurodiagnostics in laterally based lumbar surgery**
Kwon T. (GB)
- 17.25 O651 **Endoscopic-assisted anterior cervical disc replacement**
Hu J. (DE)
- 17.35 O652 **Outpatient minimally invasive transforaminal lumbar interbody fusion surgery. Assessing safety, efficacy, feasibility, and learning curve**
Garg S. (US)
- 17.45 **Fibrin-Parathyroid Hormone: In pursuit of the first drug-biologic combination for spinal fusion**
Sage K. (US)
- 18.00 O653 **Selective thoracolumbar fusion in adult spinal deformity double curves with Circumferential Minimally Invasive Surgery (CMIS)**
Anand N. (US)
- 18.10 **Extended indications for lumbar TDR**
Yip R. (HK)
- 18.25 **Closing Remarks and 2024 SMISS AP Promotion**
Choi J. (AU) & Yip R. (HK)

Poster lists



THE INTERNATIONAL SOCIETY FOR THE STUDY OF THE LUMBAR SPINE

Special Poster Session 1 – Wednesday, 3 May 07.30 – 08.30 hrs

These sessions take place in the ePoster area.

- 1A **Intervertebral disc biology**
Chairs: Haglund L. (CA) & Allini M. (CH)
- SP1 **Tie2 rejuvenation of isolated nucleus pulposus progenitor cells from young and aged donor tissue sources shows that age still matters**
Schof J. (JP)
- SP2 **Association of Expression of Cytoplasmic Activation/Proliferation-Associated Protein-1 (Caprin-1) with human intervertebral disc degeneration**
Yamada J. (JP)
- SP3 **Reparative effect of platelet-rich plasma releasate in the rabbit degenerated disc induced by Condolase**
Hasegawa T. (JP)
- SP4 **Alarmins S100A8/A9 promote intervertebral disc degeneration and inflammation-related pain in a rat model through toll-like receptor-4 and activation of the NF- κ B signaling pathway**
Liu H. (CN)
- SP5 **Cellular characteristics in inner and outer bovine annulus fibrosus cells with spinal loading model**
Tajiri R. (US)
- SP6 **Wharton's Jelly mesenchymal stem cell-derived extracellular vesicles as cell-free therapeutic approach for intervertebral disc degeneration**
Vaddala G. (IT)
- 1B **Biomechanics, muscle, and motor control**
Chair: Leinonen V. (FI)
- SP7 **Lumbar muscle structure and electrophysical properties in people with and without non-specific low back pain**
Dierckx S. (BE)
- SP8 **The association of low back pain with lumbar spine movement control impairment syndromes – A cohort study**
Takatalo J.M. (FI)
- SP9 **Biomechanical comparison and three-dimensional analysis of cement distribution patterns for different pedicle screw designs**
Sung S. (KR)
- SP10 **Linking paraspinal muscle quality and biomechanical function during dynamic tasks in chronic low back pain patients**
Bailey J. (US)
- SP11 **Characteristics of erector spinae muscle activity in the patients with adult spinal deformity: An electromyographic study using flexion-relaxation ratio during trunk bending performance**
Endo T. (JP)
- SP12 **Using integrated MRI signatures of muscle degeneration and spinal pathology as predictors of response to treatment for chronic low back pain**
Bailey J.F. (US)



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- 1C **Emerging Technologies**
Chairs: Kumar N. (SG) & Sharma A. (US)
- SP13 **Biomarker discovery by SomaScan in patients with severe low back pain**
Zhang Y. (US)
- SP14 **An inexpensive spring tensiometer correlates well with a clinical dynamometer for measuring motor strength**
Murata S. (JP)
- SP15 **Design and 3D printing of novel titanium spine rods with lower flexural modulus & stiffness profile with optimised imaging compatibility**
Kumar N. (SG)
- SP16 **Establishment of an intraoperative assisted endoscopic common iliac vein segmentation model and object detection model for intraoperative support of OILF51 (Oblique lateral Lumbar Interbody Fusion 51)**
Ueda R. (JP)
- SP17 **Per-voxel classification of Modic changes in conventional magnetic resonance images**
Brisby H. (SE)
- SP18 **Use of customized 3D printed template guides to place S2-Alar-iliac screws safely and accurately**
Pramod S. (IN)
- 1D **Epidemiology**
Chair: Cunningham J. (AU)
- SP19 **Surgical trends and regional variation in Danish patients diagnosed with lumbar spinal stenosis between 2002 and 2018: A retrospective registry-based study of 83,783 patients**
Jensen R.K. (DK)
- SP20 **Association between Modic change and PI minus LI mismatch in a large cohort: The Wakayama Spine Study**
Teraguchi M. (JP)
- SP21 **Association among PI-LI, sarcopenia and low back pain in the general population - The Wakayama Spine Study**
Hashizume H. (JP)
- SP22 **Prevalence and related factors of low back pain in the general elderly population: A Japanese cross-sectional study randomly sampled from a basic resident registry**
Uehara M. (JP)
- SP23 **A retrospective study of cauda equina syndrome: Improving diagnostic accuracy and efficiency**
Choudhury F. (US)
- SP51 **Leg length discrepancy is associated with lumbar disc disease: A study of 350 postmortem specimens**
Ahn B.T. (US)



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- 1E **Surgery General**
Chairs: Guyer R. (US) & Blumenthal S. (US)
- SP24 **Can cement augmented screws prevent implant failure without adjacent segment degeneration in multi-level lumbar interbody fusions? Analysis using finite element model**
Jo M.Y. (KR)
- SP25 **Lumbar total disc replacement for the treatment of adjacent segment degeneration after lumbar fusion**
Guyer R.D. (US)
- SP26 **Survey of lumbar spine surgery post-operative practices among spinal surgeons and rehabilitation professionals in Canada**
Bakka N.B. (CA)
- SP27 **Is the use of intra-operative neuromonitoring justified during lumbar anterior approach surgery?**
Guyer R. (US)
- SP28 **International variability in the surgical strategy on adolescent idiopathic scoliosis**
Wilke H.J. (DE)
- SP29 **Outcome of 2-level lumbar total disc replacement: Results of a long-term follow-up study**
Blumenthal S.L. (US)
- [Special Poster Session II - Friday, 5 May 07:30 – 08:45 hrs]
These sessions take place in the ePoster area.
- 2F **General Biology**
Chairs: Illien-Junger S. (US) & Akeda K. (JP)
- SP30 **The impact of the oxidized LDL/LOX-1 system on ligamentum flavum hypertrophy**
Kawabata S. (JP)
- SP31 **Effects of chondroitin sulfate-associated high osmotic pressure on metabolism in bovine and human nucleus pulposus explants**
Kanda Y. (US)
- SP32 **Association between brain response and facial color in patients with chronic low back pain**
Tanishima S. (JP)
- SP33 **Cellular and extracellular matrix modulation of ligamentum flavum hypertrophy induced by spinal destabilization**
Lam R. (SG)
- SP34 **Evaluation of a novel method for rapid pathogen identification in spinal infections**
Ikeda S. (JP)
- SP35 **Anatomical considerations of the L5 nerve root for safe sacral screw placement in spinal fusion: A cadaveric study**
Tamagawa S. (JP)

- 2G **Imaging**
- SP36 **Uncovering brain mechanisms of impaired working memory in older adults with chronic low back pain**
Wong A.Y.L. (HK)
- SP37 **Disc mechanical function with diurnal and postural loading between young and older populations evaluated with in Vivo MRI**
Vresilovic E.J. (US)
- SP38 **Dural sac compression after lumbar interbody fusion predisposes to surgical site infection - A case reference study of 35 infection cases**
Hasegawa Y. (JP)
- SP39 **Differentiating magnetic resonance images of pyogenic spondylitis and spinal Modic change using a convolutional neural network**
Mukaihata T. (JP)
- SP40 **Differences in spatial distribution patterns of paraspinal muscle composition between clinical and water-fat sequences may provide a novel approach for quantifying inter-muscular fibrosis in chronic low back pain patients**
Bailey J. (US)
- SP41 **Quantitative evaluation of the lumbar yellow ligament using MRI T2-mapping: Efficacy of its clinical application in patients with lumbar spinal stenosis**
Takaoka H. (JP)
- 2H **Non-Surgery**
Chair: Van Meirhaeghe J. (BE)
- SP42 **Content and quality appraising of clinical practice guidelines for the non-pharmacological management of spine pain: A systematic review**
AlZoubi F.M. (HK)
- SP43 **Comparison of healing rates between rigid and semi-rigid bracing in adolescent lumbar pars bone stress injuries**
Licha P. (AU)
- SP44 **Efficacy and safety of add-on mirogabalin to NSAIDs in lumbar spinal stenosis with peripheral neuropathic pain: A randomized, open-label study**
Nikaido T. (JP)
- SP45 **The association of personality traits with psychological factors in patients with musculoskeletal pain**
Fujiwara A. (JP)
- SP46 **Short- and medium-term effects of exercise therapy for patients with adult spinal deformity**
Kitamura T. (JP)
- SP47 **Life expectancy is poor in patients with diffuse idiopathic skeletal hyperostosis-related pyogenic vertebral osteomyelitis**
Yamada K. (JP)



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- 2I **Complications and Safety**
Chairs: Althala J. (IN) & Robertson P. (NZ)
- SP48 **Cerebrovascular accident as a complication of spinal surgery - A retrospective cohort study of 3,449 surgical cases in a single institute**
Sakuma Y. (JP)
- SP49 **How can we reduce mechanical complications after fusion extension surgery for lumbar adjacent segment disease?**
Ha W.J. (KR)
- SP50 **10-year longitudinal MRI study of intervertebral disc degeneration in patients with lumbar spinal canal stenosis after posterior lumbar decompression surgery**
Fujii T. (JP)
- SP52 **Postoperative spinal epidural hematoma following lumbar decompression surgery: One-year patient-reported outcome in 113 patients**
Nerelius F. (SE)
- 2J **Predicting Outcomes**
Chairs: Bae J. (KR) & Sakai D. (JP)
- SP53 **Absence of bone marrow edema predicts early bone fusion after lumbar interbody fusion**
Hasegawa Y. (JP)
- SP54 **Prognostic factors and optimal surgical management for lumbar spinal canal stenosis in patients with diffuse idiopathic skeletal hyperostosis**
Nakajima H. (JP)
- SP55 **Prevalence of and risk factors for residual neuropathic pain after lumbar spinal surgery**
Mimura Y. (JP)
- SP56 **Gut microbiome may predict spine surgery outcome: A pilot study**
Sima S. (AU)
- SP57 **Risk factors for postoperative unexpected ambulatory status after spinal surgery for metastatic spinal tumor**
Yamada K. (JP)
- SP58 **Patient-rated outcome for lumbar decompression surgery using the Far-Lateral Approach is associated with the involved level and coronal segmental angulation**
Jacob A. (CH)



THE INTERNATIONAL SOCIETY FOR THE STUDY OF THE LUMBAR SPINE

General Posters – Thursday 4 May 09.00 – 10.00 hrs
This session takes place in the ePoster area.

Basic Science

- P1 **Genome-wide association studies identify novel loci associated with chronic low back pain with and without comorbid depression**
Marfinsen A.E. (NO)
- P2 **Quantitative analysis of osteophyte distribution in diffuse idiopathic skeletal hyperostosis: Relationship with the position of the aorta**
Sun X. (CN)
- P3 **Impact of autophagy depletion on intervertebral disc cell function, cell viability and matrix degeneration**
Vo N. (US)
- P4 **Facet joint degeneration is associated with axial rotation in Adolescent Idiopathic Scoliosis**
Haglund L. (CA)
- P5 **Can baseline lumbar multifidus morphometry predict pain and disability in the ensuing two years among people with chronic low back pain?**
Pinto S.M. (HK)
- P6 **ADAM8 inactivation retards intervertebral disc degeneration in mice**
Zhang Y. (US)
- P7 **Activated neutrophils degrade human cartilage endplates**
Heggli I. (CH)
- P8 **Roles of TNFAIP8 family in intervertebral disc degeneration**
Zhang Y. (US)
- P9 **Identification of the molecular mechanism of degenerative disc disease using high-resolution mass spectrometry**
Aithala J. (IN)
- P10 **Effect of estrogen and vibration on intervertebral disc organ cultures**
Neidlinger-Wilke C. (DE)
- P11 **Does type II diabetes induce early senescence and degeneration in human intervertebral discs? A tissue biomarker evaluation**
Suchir G. (IN)
- P12 **Stromal cells in Modic type 1 change bone marrow promote neurite outgrowth**
Mengis T. (CH)
- P13 **Morphological difference of the ala of the ilium between male and female in lateral view of 3D CT**
Kashima M. (JP)
- P14 **Flexed ovine lumbar motion segments are more likely to fail via endplate fracture than by herniation under impact loading**
Van Heeswijk V.M. (NZ)

- P15 Preventive effects on intervertebral disc degeneration of Adiponectin receptor agonist AdipoRon in a rat tail puncture model
Ohnishi H. (JP)
- P16 Fundamental study on dynamic analysis of lumbar dural canal using ultrasound
Kasai R. (JP)
- P17 Selective interference of Raptor/mTORC1 protects against the progression of intervertebral disc degeneration through autophagy induction in a rat tail temporary static compression model
Kumagai N. (JP)
- P18 Distinct proteolytic activity creates a unique 'Modic disc' degradome
Mengis T. (CH)
- P19 Evaluation of cartilaginous endplate thickness distribution with UTE MRI and histology
Samarzits D. (US)
- P20 Kartogenin enhances the antioxidant functions and promotes differentiation of nucleus pulposus mesenchymal stem cells to nucleus pulposus-like cells
Ruan D. (CN)
- P21 Comparing transforaminal lumbar interbody fusion versus posterolateral fusion in patient-reported outcomes, complications, readmissions, and revisions
Pennings J. (US)
- P22 Two injected hydrogels stay within the disc after realistic dynamic testing. An in vitro study with bovine tail discs
Wilke H.J. (DE)
- P23 Novel 3D Printable PEEK-HA-Mg2O4Si composite material for spine implants: Biocompatibility & imaging compatibility assessments
Kumar N. (SG)
- P24 Addition of platelet-rich plasma and bone marrow to demineralized bone matrix promotes bone fusion
Takuma O. (JP)
- P25 Expression of Caspase recruitment domain-containing protein 14 (CARD14) in human nucleus pulposus
Kawaguchi K. (JP)
- P26 M2 macrophage infiltration and modulation in hypertrophied ligamentum flavum
Lam R. (SG)
- P27 Functionalized self-assembling peptide RADKPS hydrogel promotes regenerative repair of degenerated intervertebral discs
Ruan D. (CN)
- P28 CD-9 as a novel marker of healthy adult nucleus pulposus cells
Smith L.J. (US)
- P29 Intradiscal Cutibacterium acnes decide on innate and adaptive immune pathways in Modic type 1 changes
Heggli I. (CH)

- P30 Modic type 2 changes are fibroinflammatory changes with complement system involvement adjacent to degenerated vertebral endplates
Heggli I. (CH)
- P31 The relationship between gastro esophageal reflux disease and spinal sagittal alignment in elderly patients with osteoporosis
Ikeda S. (JP)
- P32 Growth differentiation factor 5 inhibits lipopolysaccharide-mediated pyroptosis of nucleus pulposus mesenchymal stem cells via the RhoA signaling pathway
Ruan D.K. (CN)
- P33 A prospective randomized study assessing the impact of standardized educational curriculum on resident rod bending proficiency
Nasser A. (US)
- P34 The fusion of interspinous process and articular process affects the establishment of lumbar instability disc degeneration model: A study from New Zealand rabbits
Zhang X.Y. (CN)
- P35 The effect of prolonged rhBMP-2 treatment on telomerase activity, replicative capacity and senescence of human nucleus pulposus cells
Cho W.J. (KR)
- P36 Physiological measurement of nucleus pulposus oxygen, glucose and lactate in a goat model of disc degeneration: Preliminary findings
Smith L.J. (US)
- P37 Effects of organ culture and mesenchymal stem cell injection on nucleus pulposus extracellular matrix expression and cell cycle progression
Smith L.J. (US)
- P38 Content validation of the CopAQ for patients with low back pain: A qualitative study
Bakka N. (CA)
- P39 Elucidating the potential therapeutic mechanisms underlying distraction spinal cord injury
Hai Y. (CN)
- P40 Age-related decline in lumbar disc height impacts pain and sensitivity associated behaviors in mice
Dahia C. (US)
- P41 The efficacy of single stage correction by posterior approach for neglected congenital scoliosis in adulthood
Chang D.G. (KR)
- P42 Enhanced intervertebral disc repair and regeneration using a nano-hybrid peptide hydrogel
Han I. (KR)
- P43 Inflammatory priming of MSCs fades rapidly but can be partially preserved with 3D priming and a continuous pro-inflammatory stimulation
Dudli S. (CH)

- P44 Biomechanics, muscle, and motor control
Comparison of the susceptibility to implant failure in the lateral, posterior, and transforaminal lumbar interbody fusion: A finite element analysis
Oikawa R. (JP)
- P45 **Lumbar multifidus structure and proprioceptive postural control in people with and without non-specific low back pain**
Dierckx S. (BE)
- P46 **Comparison of multifidus fatty infiltration in various lumbar disorders**
Naresh-Babji J. (IN)
- P47 **Comparison of surgical correction rates between Titanium and Cobalt-Chrome-Alloy as rod materials in adolescent idiopathic scoliosis**
Chang D.G. (KR)
- P48 **Bone bridge effect for the treatment of a acute osteoporosis vertebral compression fractures: Multistrategic approach using anabolic versus anti-resorptive agents**
Yoon J.Y. (KR)
- P49 **Biomechanical metrics to predict muscle loading patterns in chronic low-back pain patients using a 3D model**
Bailey J. (US)
- P50 **Development of a simplified computationally time efficient clinical finite element model**
Ghosh N. (NZ)
 Epidemiology
- P52 **Association between scoliosis and gastrointestinal disorders: A large-database study**
Lee S.B. (KR)
- P53 **Unsupervised machine learning for data-driven discovery of chronic low back pain phenotypes based on patient reported outcomes**
Keller A. (US)
- P54 **Systematic literature review and meta analysis on the clinical outcomes of spine surgeries in Asian patients with concurrent osteoporosis**
Nishida K. (JP)
- P55 **Frailty is a potential prognostic factor for patients with symptoms of metastatic spinal tumor as initial manifestation of malignancy**
Kitamura K. (JP)
- P56 **Low back pain in Australian Crossfit participants: A national survey**
Lustig B. (AU)
- P57 **Epidemiology of pediatric major trauma patient with spinal injury**
Jean J.M. (KR)
- P58 **Effect of spinal injury on mortality of children with major trauma: A Korean level 1 trauma center study**
Jean J.M. (KR)

- P59 **CAPER: Patient preferences to inform non-surgical treatment of chronic low back pain**
Wilson L. (US)
- P60 **How long does it take for C-reactive protein to return to normal in culture-positive pyogenic vertebral osteomyelitis?**
Katuka A. (JP)
- P61 **A conceptual model for spine surgery recovery: A qualitative study of patient expectations, experiences, and satisfaction**
Ayher K. (US)
- P62 **Does daily exercise prevent future care needs related to spinal sagittal imbalance? Locomotive syndrome and health outcomes in the Aizu Cohort Study (LOHAS)**
Watanabe K. (JP)
- P63 **Incidence and risk factors for progression of lumbar facet joint degeneration in a Japanese community: 11-year follow-up**
Kobayashi K. (JP)
- P64 **Proximal junctional kyphosis in adolescent idiopathic scoliosis following pedicle screw instrumentation: More than 5-year follow-up data**
Chang D.G. (KR)
- P65 **Did COVID-19 affect lumbar trauma? A 2-year experience at a single center, Wakayama, Japan**
Ishimoto Y. (JP)
 Imaging
- P66 **Lumbar vacuum disc presence and size are related to spinopelvic balance**
Hu S. (US)
- P67 **Quantification of the molecular content of the disc during normal breathing with magnetic resonance spectroscopy**
Brisby H. (SE)
- P68 **Three-column fractures in the ankylosed spine: A systematic approach to imaging and assessment**
Nassar A. (US)
- P69 **Lumbar cartilaginous endplate thickening observed with advancing disc degeneration and UTE MRI**
Samarziz D. (US)
- P70 **Clinical features of bone marrow edema lesions of the posterior elements in the lumbar spine among symptomatic adults**
Sugiyama K. (JP)
- P71 **Investigation of factors affecting bilateral Achilles tendon reflex loss**
Otani K. (JP)
- P72 **Paraspinal muscle morphology and composition in lumbar spinal stenosis vs. chronic low back pain**
Mineyama M. (CA)



THE INTERNATIONAL SOCIETY FOR THE STUDY OF THE LUMBAR SPINE

- P73 **A new magnetic resonance imaging technique to reduce medical radiation exposure during the treatment of lumbar spondylolysis: A preliminary study**
Okuyama K. (JP)
- P74 **Lumbar osteoporotic fractures develop in segments with less degenerated discs which then become more degenerated**
Sharma A. (US)
- P75 **Association between paraspinal muscles and degenerative spine conditions in patients with lumbar spinal stenosis**
Minefama M. (JP)
- P76 **Associations between high intensity zones and intervertebral disk degeneration and low back pain in patients with degenerative disk disease: a retrospective case-control study**
Sima S. (AU)
- P77 **The use and applicability of magnetic resonance elastography on the musculoskeletal system of adults: A scoping review**
Jensen T.S. (DK)
- P78 **Relationship between lumbar disc degeneration, endplate defects and Modic changes: A longitudinal study**
Murto N. (FI)
- P79 **Modic Changes of different types often coexist with erosive endplate lesions and vertebral sclerosis**
Brisby H. (SE)
- P80 **Long-term influence of paraspinal muscle quantity in adolescent idiopathic scoliosis following deformity correction by posterior approach**
Chang D.G. (KR)
- P81 **Body composition in non-older patients with degenerative lumbar spine disease - Comparison with healthy volunteers**
Tanaka M. (JP)
- P82 **Indirect assessment of T10 vertebra Hounsfield unit values using lumbar vertebral body measurements**
Yoon S. (US)
- P83 **Cervical spinal cord and cervical nerve root T2 values in healthy volunteers in MRI T2-mapping novel imaging methods: MIXTURE and SHINKEI-Quant**
Tokeshi S. (JP)
- P84 **Usefulness of DXA and BIA for trunk muscle mass measurement - Focus on trunk muscle volume by using 3D image processing workstation**
Fujimoto K. (JP)
- P85 **Efficacy of the VBQ Score in predicting the incidence of new vertebral fractures in perimenopausal women - A longitudinal study using 11-year lumbar MRI follow-up data from the Minami-Aizu Study**
Yokota T. (JP)



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- Non-Surgery
- P86 **Cross-cultural adaptation and validation of the traditional Chinese version of optimal screening for prediction of referral and outcome yellow flag assessment tool**
Wong A.Y.L. (HK)
- P87 **Exploratory study of the factors affecting quality of life in patients with chronic musculoskeletal pain: A cross-sectional study**
Takahashi N. (JP)
- P88 **Continued multiple types of exercise after balloon kyphoplasty reduce the incidence of subsequent vertebral fractures: A retrospective study with a 6- or 12-month follow-up**
Nakatani T. (JP)
- P89 **Impact of lumbopelvic parameters on level of osteoporotic vertebral compression fracture**
Aoki K. (JP)
- P90 **Safety and tolerability of intradiscal STA363 (lactic acid) in patients suffering from degenerative disc disease**
Lehmann A. (SE)
- P91 **Comparison of the intramuscular circulation of lumbar multifidus in subjects with and without low back pain in trunk extension and extended exercise position**
Kanda M. (JP)
- P92 **Comparative effects of discectomy, physiotherapy or advice for people with lumbar disc herniation with associated radiculopathy: Results of a 3-group comparison across two prospective studies**
Hahne A. (AU)
- P93 **Mild cognitive impairment in elderly patients with lumbar spine stenosis**
Watanabe K. (JP)
- P94 **Relationship between body composition and surgical site ceftazolin concentration in lumbar spine surgery**
Baker J. (NZ)
- P95 **Relationship between MRI findings and pain of postural situation in patients with chronic low back pain**
Sugiura S. (JP)
- P96 **Effectiveness of a novel brace on adolescent idiopathic scoliosis - Multicenter clinical trial with biomechanical study**
Hirata K. (JP)
- P97 **The examination of the trigger and background leading to the diagnosis of metastatic spinal tumor**
Shiga Y. (JP)
- P98 **Comparison of jack-knife stretching and passive-static stretching on hamstring flexibility and quadriceps muscle power**
Sugiura S. (JP)
- P99 **Does the presence of inflammation impact surgical and conservative management outcomes for people with lumbar disc herniation with associated radiculopathy?**
Hahne A. (AU)



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- P100 **Long term follow-up study examining safety and efficacy of aggressive exercise therapy for patients with pediatric spondylolysis using a telephone questionnaire**
Sugiura S. (JP)
- P101 **A small experience of extra corporeal shock waves therapy (ESWT) for 5 cases of lumbar spondylolysis**
Hatakeyama K. (JP)
Surgery
- P102 **Ten-year postoperative good outcomes after facet fusion using a percutaneous pedicle screw system for degenerative lumbar spondylolisthesis**
Miyashita T. (JP)
- P103 **Validity of the Roussouly classification system for assessing distal junctional problems after long instrumented spinal fusion in degenerative scoliosis**
Zhang H. (CN)
- P104 **Clinical and radiological outcomes of hemivertebra resection for congenital scoliosis in children under age 10 years: More than five-year follow-up**
Chang D.G. (KR)
- P105 **Is more beneficial longer use of teriparatide for surgical outcomes after spinal fusion?**
Kim H.C. (KR)
- P106 **Clinical outcomes of microendoscopic decompression for lumbar canal stenosis: A comparison between patients with and without degenerative lumbar scoliosis**
Tanimoto K. (JP)
- P107 **Clinical features of Tight Film Terminale and its surgical outcome**
Terai H. (JP)
- P108 **Poor prognosis factors of percutaneous endoscopic debridement and irrigation for pyogenic spondylodiscitis in thoraco-lumbar spine**
Yamada K. (JP)
- P109 **Lumbopelvic alignment and surgical outcomes after single-level transforaminal lumbar interbody fusion predicted by a combination of intervertebral disc vacuum phenomenon and postural differences in lumbar lordosis**
Ohyama S. (JP)
- P110 **Does peri-operative PTH analogues in osteoporotic patients help increase bone density, and decrease mechanical complications – Minimum 2-year radiological study measuring Hounsfield units**
Anand N. (US)
- P111 **Learning curve for minimally invasive scoliosis surgery in adolescent idiopathic scoliosis**
Chang D.G. (KR)
- P112 **Risk factors of residual leg numbness after posterior lumbar interbody fusion in the elderly over 75 years of age**
Tsujiimoto T. (JP)
- P113 **Minimum invasive screw insertion technique (CBT/ TASS) for L5/S1 P11F in isthmic spondylolisthesis**
Terai H. (JP)



THE INTERNATIONAL SOCIETY FOR THE STUDY OF THE LUMBAR SPINE

- P114 **Multi-domain biopsychosocial postoperative recovery trajectories associate with patient outcomes following lumbar fusion**
Bailey J. (US)
- P115 **Association of central sensitization with surgical outcome for lumbar disc herniation in a multicenter prospective study**
Yamada J. (JP)
- P116 **Predictors of dynamic instability in the decision to fuse in lumbar degenerative spondylolisthesis: Results from the CSORN prospective DS study**
Rodriguez Fernandes R.J. (CA)
- P117 **Patterns of opioid use prior to single-level lumbar fusion are associated with postoperative opioid use and adverse events**
Hu S. (US)
- P118 **Age and disc wedging are independent risk factors for recurrent herniation after microendoscopic discectomy**
Kuroshima K. (JP)
- P119 **Effects of preoperative fatty degeneration of the multifidus muscle on the surgical outcome of one-level oblique lumbar interbody fusion**
Arai T. (JP)
- P120 **Influence of residual pain on health-related and disease-specific QOL after posterior fusion surgery for lumbar degenerative diseases - A minimum 2-year follow-up**
Endo T. (JP)
- P121 **Outcomes of emergency surgery in patients with spinal metastases: A prospective cohort study**
Kanda Y. (JP)
- P122 **Efficacy of the posterior elements preservation for preventing secondary intervertebral disc degeneration and postoperative back pain in posterior decompression surgeries in the lumbar spine**
Ohnishi T. (JP)
- P123 **Rib regeneration morphology after thoracoplasty in adolescent idiopathic scoliosis**
Chang D.G. (KR)
- P124 **Does continuation of antiplatelet medication affect the complication and surgical outcomes after minimally invasive lumbar posterior decompression surgery?**
Sawada Y. (JP)
- P125 **Analysis of risk factors of adjacent vertebral fracture after balloon kyphoplasty including trunk muscles**
Sumiyoshi N. (JP)
- P126 **The influence of sagittal alignment after en bloc resections of the lumbar spine**
Bejjani P. (IT)
- P127 **Is interspinous process device really safe and effective in elderly patients with lumbar degeneration**
Hai Y. (CN)

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- P128 **Lamina fracture and fracture risk factor prediction according to the range and shape of lumbar laminectomy - finite element analysis**
Youn J.H. (KR)
- P129 **Balloon kyphoplasty combined with percutaneous pedicle screw (BKP+PPS) for the treatment of osteoporotic thoracolumbar vertebral body fractures has minimum correction loss 2 years after surgery**
Kojima A. (JP)
- P130 **Changes and affecting factors of sagittal alignment after decompressive laminectomy for lumbar spinal stenosis: Analysis using the EOS imaging system**
Jung H.Y. (KR)
- P131 **Additional operations for degenerative spine diseases: Patterns in causes and treatment. Minimum ten years follow-up of 5469 patients**
Sigmundsson F.G. (SE)
- P132 **Use of Surgiflo Hemostatic Matrix reduces intraoperative blood loss during posterior instrumented thoracolumbar spinal surgery for patients with adult spinal deformity**
Takahashi H. (JP)
- P133 **Comparison of the facet fusion rates between percutaneous pedicle screw and cortical bone trajectory screw fixation for degenerative lumbar spondylolisthesis**
Miyashita T. (JP)
- P134 **Severe multifidus sarcopenia and lower Hounsfield units are predictors of increased risk for proximal junctional complications following thoracolumbar fusion**
Nassar A. (US)
- P135 **Clinical and radiographic predictors of health related quality of life in patients treated surgically for L4/5 degenerative spondylolisthesis**
Filley A. (US)
- P136 **Effect of residual leg numbness after lumbar surgery on surgical outcomes for patients with lumbar degenerative diseases**
Takegami N. (JP)
- P137 **Association of sarcopenia with the length of hospital stay by elderly patients after lumbar surgery**
Fujimoto K. (JP)
- P138 **A comparison of the treatment of lumbar degenerative disease by lateral lumbar interbody fusion in patients under and over 80 years of age**
Hiyama A. (JP)
- P139 **Surgical outcomes and problems of delayed neurologic deficit after osteoporotic vertebral fractures in elderly patients**
Sumiyoshi N. (JP)
- P140 **L5/S1 mild to moderate foraminal stenosis and clinical outcome after L4/5 lumbar fusion surgery**
Cho J.H. (KR)
- P141 **Surgical outcomes of primary versus additional PLIF/TLIF at lumbosacral segment**
Hyakkan R. (JP)

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- P142 **A case study of multiple lumbar endoscopic surgeries - Comparison of cases with symptom resolution after initial surgery and cases with residual symptoms**
Murakami K. (JP)
- P143 **Surgical outcomes of posterior surgery for pseudoarthrosis after osteoporotic vertebral compression fracture**
Suzuki S. (JP)
- P144 **Socioeconomic status and race do not influence inpatient opioid use in 1-level posterior lumbar fusions**
Barber L.A. (US)
- P145 **Efficacy of smart glasses for percutaneous pedicle screw insertion**
Hirataka Y. (JP)
- P146 **Minimally invasive transforaminal lumbar interbody fusion for isthmic spondylolisthesis: Comparison between decompression with and without resection of fibrocartilage tissue**
Miyazaki S. (JP)
- P147 **Efficacy of surgical treatment on polypharmacy of elderly patients with lumbar spinal canal stenosis: A prospective observational study**
Kawabata S. (JP)
- P148 **Investigation of preventive local negative pressure therapy for spinal surgery Surgical Site Infection (SSI) high-risk cases**
Toshi N. (JP)
- P149 **Surgical treatment for symptomatic spinal metastasis enables continuation/introduction of chemotherapy**
Takeoka Y. (JP)
- P150 **Examination of the rate of Surgical Site Complication (SSC) in spinal metastasis surgery cases**
Toshi N. (JP)
- P151 **Reduction in lower lumbar lordosis angle in spine fusion surgery, followed by a compensatory increase in focal L3-L4 angle, increases the risk of adjacent segment disease**
Rodrigues Fernandes R.J. (CA)
- P152 **Experience with continuous local antibiotic perfusion (CLAP) for infections after spinal fusion surgery**
Okuyama K. (JP)
- P153 **Oblique lateral interbody fusion shows better radiological outcomes than anterior lumbar interbody fusion in single-level lumbar fusion**
Jeon J.M. (KR)
- P154 **Incidence and risk factors of spinal cord stimulation for persistent or recurrent pain after lumbar spine surgery: A population-based study**
Leinonen V. (FI)
- P155 **Clinical outcome of surgery for patients with spinal cord injury aged 75 and older**
Chikawa T. (JP)



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- P156 **A retrospective study about the possibility to avoid preoperative radiotherapy for the patients of spinal metastasis surgery: Another approach to reduce postoperative wound dehiscence**
Zhang Z. (JP)
- P157 **Perioperative clinical comparison of full-endoscopic trans Kambin's triangle lumbar interbody fusion (Full-endo KIF) using the PELIF® system and MIS-TLIF for degenerative lumbar spinal disease**
Kojima A. (JP)
- P158 **Accuracy and treatment results of Cervical posterior instrumentation for Cervical spinal injury using O-arm Navigation**
Chikawa T. (JP)
- P159 **Morphological change in vertebrae after direct vertebral rotation technique in surgical treatment of adolescent idiopathic scoliosis: Long-term longitudinal study of computed tomography evaluation of vertebral rotation**
Chang D.G. (KR)
- P160 **Minimally invasive scoliosis surgery for adolescent idiopathic scoliosis: A novel coin hole technique**
Chang D.G. (KR)

Monday

Tuesday

Wednesday

Thursday

Friday

Posters

AOSPINE

AOSPINE

- P161** **Arthroplasty - Cervical**
Analysis of the morphometric change in the uncinat process of the cervical spondylosis patients: A study of radiological anatomy
Alattar E.N.M. (CN)
- Basic science**
- P162** **En route to novel treatment strategies for discogenic pain: Celecoxib reduces sensitization of dorsal root ganglion cells in the inflammatory milieu in vitro**
Häckel S. (CH)
- P163** **Homeostasis of extracellular matrix in the intervertebral disc cells by a ctivation of protein kinases C**
Shin J. (KR)
- P164** **Haemodynamic instability following sudden release of cervical collar in a patient with cervical spine injury**
Kelly R.S. (MY)
- P165** **Kloho is not associated with age-related degeneration of intervertebral disc in mice**
Dainta C. (US)
- Biomechanics**
- P166** **Spinal anterior cervical plate evaluation in non-corpectomy model**
Kanchi Subramani N.K. (US)
- P167** **Instability analysis after compression and flexion-compression trauma of the lower thoracic spine: An in vitro study**
Wilke H.J. (DE)
- Deformity – Cervical**
- P168** **Profilas segmentation anomalies of the craniovertebral junction**
Muthukumar N. (IN)
- P169** **Halo traction evaluation of cranio-cervical instability in hereditary connective tissue disorder patients: Case series**
Bohra H. (AU)
- Deformity – Thoracolumbar**
- P170** **Preliminary report on one stage Vertebral Colum Resection (VCR) only from posterior using expandable interbody cage (Stryker:VLIFF) - Surgical technique of thoraco-lumbar lesion for burst fractures and tumors**
Iizuka T. (JP)
- P171** **Cardiopulmonary function is compromised more in patients with early-onset scoliosis from high-altitude area**
Hai Y. (CN)
- P172** **Can the Proximal Humerus Ossification System (PHOS) effectively guide brace wearing in patients with adolescent idiopathic scoliosis?**
Cheung J.P.Y. (HK)

- P173** **Surgical impact of two brands of tranexamic acid in scoliosis surgery: Is bioequivalence real?**
Weissmann K.A. (CL)
- P174** **Early-onset scoliosis predictive factors analysis of the Brazilian children quality of life using the new eosq-24 questionnaire tool**
Cristante A. (BR)
- P175** **Psychological pre-operative evaluation in patients with Adolescent Idiopathic Scoliosis (AIS) - Surgical contraindications**
Weissmann K.A. (CL)
- P176** **Health-related quality of life in adolescents with idiopathic scoliosis in Brunei Darussalam: A comparison with age- and sex-matched healthy controls**
Thien A. (BN)
- P177** **Effectiveness of growing rod insertion in early-onset scoliosis**
Nirngan E.E. (MY)
- P178** **What decides shoulder levels in a double thoracic (lenke 2) adolescent idiopathic scoliosis?**
Narash-Babu J. (IN)
- P179** **Pre-operative CT scan for screw placement safety in idiopathic adolescent scoliosis**
Marfikos K. (IT)
- P180** **Early outcomes of EOS treatment using MCGR in a LMIC spine centre**
Farooq N. (GB)
- Degenerative – Cervical**
- P181** **Ethnic variation in cervical spine canal dimensions**
Baker J. (NZ)
- P182** **A novel technique for posterior instrumentation of the subaxial cervical spine**
Muthukumar N. (IN)
- P183** **Development of an MRI score for the severity of degenerative cervical myelopathy (SIMS) - Clinical and electrophysiological correlation about 99 cases**
Barrey C. (FR)
- P184** **C5 palsy after posterior cervical spine decompression: A retrospective single centre review and experience in 1260 cases**
Dave M. (IN)
- Degenerative - Lumbar**
- P186** **Evaluating 5-year outcomes of between the use of Colflex compared to Stenofix device as an adjunct to decompression for symptomatic lumbar spinal stenosis**
Kumar N. (SG)
- P187** **Back and leg aches are not always our headache**
Shanmugam J.T. (MY)
- P188** **Retrolithesis: Prevalence and clinical outcome following non operative/ minimally invasive intervention**
Aithala J.P. (IN)

Diagnostics

- P189** A diagnostic deep neural network for spine oncology achieves 99.9% validation accuracy on 35 benign and malignant soft tissue lesions
Nye L. (US)
- P190** The complication rate and surgical outcomes of posterior ring apophyseal fracture
Inoue T. (JP)
- P191** Superiority of MRI for evaluation of sacral insufficiency fracture
Tanaka M. (JP)
- P192** Proposed objective scoring algorithm for walking performance, based on relevant gaitmetrics: The Simplified Mobility Score (SMoS™) -Observational study
Fonseka D. (AU)
- P193** Factors associated with rapidly deteriorating myelopathy in patients with spinal arteriovenous shunts
Miyahara T. (JP)
- Disc degeneration**
- P195** ALIF for re-occurring disc herniation and post-discectomy discogenic low back pain: A clinical series with risk / benefit analysis
Mobbs R.J. (AU)

Epidemiology

- P196** The epidemiology and demographics of adolescent idiopathic scoliosis in Brunei Darussalam
Thien A. (BN)

Imaging

- P197** Trabecular bone restoration for clinical CT images by learning-based method
Zhang T. (HK)
- P198** Reliability of endplate measurements on digital radiographs of the lumbar spine
Yoon S. (US)
- P199** Assessing neutral craniocervical alignment in patients with traumatic craniocervical dissociation
Dhillon E. (US)
- Infections**
- P200** Is vancomycin more effective than tauridine? Comparative analysis of their preventive effect against spinal infection in 1000 patients with spinal fusion
Lee B.H. (KR) & Eun D.C. (KR)

- P201** Functional outcomes in the management of cervicothoracic junction tuberculosis
Rathod T. (IN)

- P202** A 2-year-old paraplegic boy
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- P399** A physiotherapist-led Same Day Emergency Care (SDEC) unit for atraumatic spinal pain appears to be a cost-effective and efficacious pathway
Wood L. (GB)
- Motion preservation**
- P400** Proposed classification system of radiographic bony changes after cervical disc replacement
Khachatryan A. (US)
- Psychosocial/Behavioral**
- P402** Preoperative psychosocial risk using the STarT Back Screening Tool is not associated with postoperative spine surgery outcomes
Archer K. (US)
- Socioeconomics/Industrial/Ergonomics**
- P403** Net promoter score in spine surgeries
Iwai H. (JP)
- Spinal deformity**
- P404** Learning curve of mini-open correction and fusion for Adolescent Idiopathic Scoliosis (AIS) Correction: A single surgeon's 12 years' experience
Truumees E. (US)
- P405** Comparison of Adolescent Idiopathic Scoliosis (AIS) correction -open vs. minimally invasive cohorts: A 2 years radiographic and surgical outcome study
Truumees E. (US)
- P406** Feasibility and outcomes of mini open correction and fusion for Adolescent Idiopathic Scoliosis (AIS): 2-5 Years follow-up
Truumees E. (US)
- P407** Clinical and radiographic outcomes in the treatment of patients with Scheuermann kyphosis using posterior instrumented fusion
Truumees E. (US)
- P408** Intrathecal nusinersen injection for spinal muscular atrophy post spinal deformity correction surgery - A technical note
Pramod S. (IN)

- P409 **Complication rates for robotic-assisted placement of over 1,500 pedicle screws in pediatric posterior spinal fusion**
Heyer J. (US)
- P410 **Ultrasonographic assessment of magnetic growing rods overestimates the growth of the spine compared to X-ray**
Oggiano L. (IT)
- P411 **Clinico-radiological outcomes of posterior vertebral column resection for severe kyphotic spinal deformity: A single institutional study**
Vemula V.R.C. (IN)
- P412 **Vertebral body tethering for the treatment of idiopathic scoliosis**
Marfikos K. (IT)
- Surgery – Cervical**
- P413 **Reliability and diagnostic accuracy of standard dermatomes and myotomes for determining the pathologic level in surgically verified patients with cervical radiculopathy**
Hong C.G. (KR)
- P414 **Impact of occupational characteristics on return to work for employed patients after elective cervical spine surgery**
Pennings J.S. (US)
- P415 **Impact of unplanned readmissions of 12-month patient reported outcomes after cervical spine surgery**
Pennings J.S. (US)
- P416 **Fusion rate of anterior-only versus anteroposterior approach for three-level cervical interbody fusion**
Dhillon E. (US)
- Surgery - Thoracolumbar**
- P417 **The effect of intraoperative intrathecal opioid administration on the length of stay and postoperative pain control for patients undergoing lumbar interbody fusion**
Villavicencio A. (US)
- P418 **Complication rates of thoracic spine fusion in patients with Parkinson's disease**
Buser Z. (US)
- P419 **Impact of unplanned readmissions of 12-month patient reported outcomes after lumbar spine surgery**
Pennings J. (US)
- P420 **The influence of sarcopenia and paraspinous muscle composition on patient-reported outcomes: A prospective investigation of lumbar spinal fusion patients with 12-month follow-up**
Azami A. (US)
- P421 **The impact of frailty on patient-reported outcomes 1 year after posterior lumbar fusion surgery**
Azami A. (US)
- P422 **3D printed custom navigation jigs in posterior spinal fusion: A retrospective case series**
Lui D. (GB)

- P423 **Application of autologous bone matrix enriched with growth factors (Sticky Bone) during minimally invasive Transforaminal Lumbar Interbody Fusion (TLIF): An orthobiologic-translation from maxillofacial to spinal surgery**
Hubbe U. (DE)
- Trauma**
- P424 **Outcomes in patients with vertebral injury after blunt cervical spine trauma**
Truumees E. (US)
- P425 **The impact of coccygectomy on sexual and social function in females with chronic coccygodynia**
Simony A. (DK)

- P426 **Posterior peti-apical self-distracting device system in a patient with hypermobile Ehler-Danlos syndrome, scoliosis and L5-S1 spondylolytic spondylolisthesis**
Weissmann K.A. (CL)
- P427 **Radiological parameters of spino-pelvic sagittal balance: Comparison of measurements obtained by radiologists through the traditional method versus orthopedic surgeons with semi-automated software (SURGIMAP)**
Fleiderman J. (CL)
- P428 **Transforaminal intersomatic implants in one or two levels of the lumbar region - Are we really recovering lordosis?**
Fleiderman Valenzuela J. (CL)

- P429 **Prevalence and discordance of the "startle response" with true discogenic pain according to spine intervention society guidelines for provocation discography: A cohort study**
DeFrancesch F. (US)
- P430 **Expectancy-related generation of placebo does not predict success or failure of high-quality diagnosis and thermal neurotomy of zygapophysial or sacroiliac joints**
Speldewinde G. (AU)
- P431 **Does fibromyalgia affect the outcomes of spinal cord stimulation: An 11-year, multicenter, retrospective matched cohort study**
Schappell J. (US)
- P432 **Patient satisfaction with spinal cord stimulation and dorsal root ganglion stimulation for chronic intractable pain: A systematic review and meta-analysis**
Ha C. (US)
- P433 **Influence of Covid-19 pandemic on the epidemiology of vertebral fractures**
Ardura F. (ES)
- P434 **Selective nerve root block versus transforaminal and interlaminar epidural injections – which should we be doing**
Wilk V. (AU)
- P435 **Comparison of platelet-rich plasma versus radiofrequency ablation for treatment of cervicogenic headache- 3 year results**
Zarembinski C. (US)

- P436 **Anterior cervical**
Varying degrees of disc height after anterior or posterior percutaneous endoscopic cervical discectomy for disc herniation on radiographs and magnetic resonance imaging
 Tsou H.K. (TW)
- P437 **Anterior lumbar**
Disability outcome differences between patients who had minimally invasive transforaminal lumbar interbody fusion as their first surgery and patients that had the surgery following any lumbar surgery for lumbar degenerative conditions
 Koremans F. (AU)
- P438 **Biologics**
Retrospective case series of porous printed titanium cages in anterior to psoas oblique lumbar interbody fusion surgery assessing fusion rates and functional outcomes with Magnes bone graft
 Macalouy J. (AU)
- P439 **Complications**
Postoperative Herpes zoster mimicking recurrent radiculopathy after full endoscopic transforaminal lumbar discectomy
 Heo Y. (KR)
- P440 **Deformity**
Retrospective matched comparison study on non fusion anterior scoliosis correction (NFASC) versus posterior spinal fusion (PSF) for Lenke 5 adolescent idiopathic scoliosis (AIS) curves in skeletally mature children: Clinico-radiological outcomes with 2 years follow up
 Badrikilaya V. (IN)
- P441 **Endoscopy**
Endoscopic 4 MHz radiofrequency treatment of the facet joint syndrome
 Woliechowsky C. (DE)
- P442 **End plate spur: The forgotten pathology in lumbar foraminal stenosis and how we handle it using BESS (bipartial endoscopic spine surgery)**
 Huang Y. (SG)
- P443 **Full endoscopic decompression for L5/S1 extraforaminal stenosis (Far-out syndrome) with L5 radiculopathy: Case series and early clinical outcome**
 Kwon W.K. (KR)
- P444 **A beginner's perspective on bipartial endoscopic spine surgery in single-level lumbar decompression: A comparative study with a microscopic surgery**
 Song K.S. (KR)
- P445 **Short-term outcomes of full-endoscopic disc cleaning surgery against intractable low back pain due to Modic type 1 change**
 Sugira K. (JP)

- P446 **Perioperative glucose response in diabetic and non-diabetic patients with lumbar spinal stenosis treated with bi-portal endoscopic decompression**
 Quillo-Olivera J. (MX)
- P447 **Health economics**
Challenges encountered with a decade long experience of spectrum of spine services from conventional surgeries to MISS under constrained resources in a country like Nepal
 Shahi P. (NP)
- P448 **Is full endoscopic spinal surgery a cost-effective alternative to microdiscectomy? Review of the evidence**
 Gibson J.N.A. (GB)
- P449 **Lateral techniques**
Lateral versus posterior techniques for treatment of degenerative pathologies – Systematic review and metaanalysis
 Pimenta L. (BR)
- P450 **PTP for deformity**
Pimenta L. (BR)
- P451 **Radiographic outcomes of the prone transpoas lateral lumbar interbody fusion for degenerative lumbar spine disease: A multicentre study**
 Pollina J. (US)
- P452 **Comparison of prone transpoas and standard lateral lumbar interbody fusion surgery for degenerative lumbar spine disease: A retrospective radiographic propensity score-matched analysis**
 Pollina J. (US)
- P453 **A retrospective study of cage subsidence in OLIF patients**
 Sneft S. (IN)
- P454 **Prospective multi-center comparative study of the perioperative outcomes associated with the early 'prone lateral' experience versus 'PTP' proceduralization**
 Howell K. (US)
- P455 **Restoration of segmental lordosis and lumbar lordosis after oblique lumbar interbody fusion**
 Jhala A. (IN)
- P456 **Classification of the OLIF corridor and its utility in predicting the ease of surgery**
 Vemula V.R. (IN)
- P457 **The correlation of iliac crest morphology and safe working zone for lateral lumbar interbody fusion: Radiographic and MRI study**
 Keorochana G. (TH)
- P458 **MISS**
The presence of firm epidural ligamentous tissue, a risk factor for intraoperative dural tear, can be frequently identified intraoperative microendoscopic laminectomy
 Inokuchi A. (JP)

SOCIETY FOR MINIMALLY INVASIVE SPINE SURGERY

Motion preservation

P459 **Lumbar arthroplasty for treatment of primary or recurrent lumbar disc herniation**
Madaouly J. (AU)

P460 **One year clinical and radiographic outcomes of cervical arthroplasty with synergy disc**
Madaouly J. (AU)

Navigation, robotics and artificial intelligence

P461 **Technical errors in pedicle screw placement in minimal invasive computer assisted spine surgery**
Hubbe U. (DE)

Posterior techniques

P462 **Three-dimensional analysis of the ideal entry point for sacral alar iliac screws**
Tanaka M. (JP)

P463 **Does minimally access transforaminal lumbar interbody fusion (TLIF) achieve desired contralateral decompression using only ipsilateral approach by a tubular retractor system in patients undergoing fusion surgery for spondylolisthesis with bilateral leg/ buttocks symptoms**
Baid P.K. (IN)

P464 **Improved quality of life without serious complications following minimally invasive transforaminal lumbar interbody fusion for adult degenerative lumbar spine conditions - Analysis of 127patients**
Koremans F. (AU)

SL

P465 **Endoscopic 4 MHz radiofrequency treatment of the sacroiliac joint syndrome**
Wojciechowsky C. (DE)

Scoliosis and spinal deformities: Biomechanics and conservative treatment

- P466 **A pilot study using a new rigid brace "ScoliBrace" in the treatment of Adolescent Idiopathic Scoliosis (AIS) in Singapore**
Lee N. (SG)
- P467 **Successful treatment of degenerative adult scoliosis using a unique 3D over-corrective brace - A case report with 4 year follow up**
McAviney J. (AU)
- P468 **Compliance strategies in the use of ScoliBrace for adolescent idiopathic scoliosis**
Marchese R. (AU)
- P469 **Reduction of Cobb angle in Gensingen brace after failure in Providence brace**
Ellioff L. (DK)
- P470 **Reduction of Cobb angle in Gensingen brace in big curves**
Ellioff L. (DK)
- P471 **Impact of 3D printing process on mechanical properties of brace in children with idiopathic scoliosis**
Liu X.C. (CN)
- P472 **Anterior sagittal balance and Scheuermann's kyphosis of 97 degrees treated with Rigo concept physiotherapy and 2 hours brace wear/day - Case study 60-year-old adult male**
Harding R.J. (AU)
- P473 **Investigating the relationship between objective measurements and patient perception in non-treated AIS. Study 2: How much surface topography measurements affect the SRS-22 and the TAPS**
Aristegui G. (ES)
- P474 **Investigating the relationship between objective measurements and patient perception in non-treated AIS. Study 3: How much the angle of trunk inclination affects the SRS-22 and the TAPS**
Aristegui G. (ES)
- P475 **Investigating the relationship between objective measurements and patient perception in non-treated AIS. Study 4: How much the two instruments used in this study to assess patient perception - SRS-22 and TAPS- correlate?**
Aristegui G. (ES)
- P476 **Investigating the relationship between objective measurements and patient perception in non-treated AIS. Study 5: How much radiologic and surface topography measurements correlate?**
Aristegui G. (ES)
- P477 **Defining treatment success of adolescent idiopathic scoliosis from the patient perspective: Thinking beyond the Cobb angle**
Taniguchi S. (CA)
- P478 **Cervical Thoracic Orthosis (CTO) for treatment of antecollis and Pisa syndrome in Parkinson disease: A case report**
Bafasook N. (TH)

- P479 **Standing height varies in response to different verbal instructions, in children with idiopathic scoliosis**
Harding R.J. (AU)
- P480 **A telehealth assessment protocol for idiopathic scoliosis by means of photogrammetry: Development and measurement accuracy of the DIPA© capture App**
Navarro I.J. (BR)
- P481 **SEAS approach for the pre-surgical treatment of severe scoliosis in a patient with tetra-amelia syndrome: A case report**
Navarro I.J. (BR)
- P482 **A single case study for the side shift method: Demonstrating measurements of spinal motion and muscle activity during a treatment session**
Beifs T. (GB)

SPINE SOCIETY OF AUSTRALIA

TOP 10 Posters

- P483** **Surgical and patient-reported outcomes support anterior lumbar interbody fusion for the treatment of low back pain**
Celenza A. (AU)
- P484** **A hybrid atlantoaxial fusion technique utilising a transarticular and C1 lateral mass screw technique: Investigation of surgical and patient-reported outcomes, and finite element analyses of the biomechanical properties**
Cunningham G. (AU)
- P485** **Retrieval analysis of interbody cages**
Kim S.J. (AU)
- P486** **Characteristics of baseline frequency data in spinal RCTs do not suggest widespread fraud**
Levyer M.J.M.S. (AU)
- P487** **Cooled radiofrequency ablation of the sacroiliac joint: a retrospective case series**
Maalouly J. (AU)
- P488** **Use of cannulated pedicle screws for posterior spinal fixation in fractures are correlated with higher blood loss in some groups**
Rajabifard P. (AU)
- P489** **The effect of progressive herniation on lumbar intervertebral disc six degree of freedom mechanics**
Russo M. (AU)
- P490** **Development and validation of a virtual digital scoliosimeter**
Suresh S. (AU)
- P491** **Spinal cord stimulation for treatment of neuropathic pain in failed back surgery syndrome: A fifteen years experience using percutaneous leads insertion**
Morelli D. (BE)
- P492** **3D-printed patient specific interbody implants in anterior lumbar interbody fusion: A case series and review of early clinical and radiological results**
Tredan D. (AU)
- Basic science**
- P493** **The safety and efficacy of carbon-fibre-reinforced pedicle screws for degenerative and oncological spine fixation: A narrative review**
Kim S.J. (AU)
- P494** **A finite element model that predicts clinical bone remodelling in spinal fusion**
Hill J. (AU)
- P495** **Osteoinductive potential of conduit shaped calcium phosphate granules**
Walsh W. (AU)
- P496** **The influence of a threaded implant design and manufacturing on osseointegration in a large preclinical animal model**
Walsh W. (AU)

SPINE SOCIETY OF AUSTRALIA

Biomechanics

- P497** **Development of Adjacent Segment Degeneration (ASD) in thoracolumbar fusion after inappropriate rod fixation**
Nariega D.C. (ES)
- P498** **Digital image correlation for spinal implant kinematics: A methodological study**
Kim S.J. (AU)
- Cervical spine**
- P499** **Bilateral cervical plexus block for anterior cervical spine surgery: A protocol and update on a randomised placebo-controlled trial**
Mulcahy M. (AU)
- P500** **Bone defects post Caspar pin distraction during anterior cervical surgery: A case series**
Kim S.J. (AU)
- P501** **Cervical spine anomalies in a Mayan skeleton from the late classic period (ca. 600-900 a.d.) site of Comalcalco, Tabasco, Mexico**
McCarthy S. (AU)
- P502** **Clinical outcomes following cervical disc arthroplasty with Synergy prosthesis**
Malham G. (AU)
- P503** **Radiological and clinical outcome after single level anterior cervical discectomy and fusion (ACDF) using Tritanium-C® cage**
Stovell M.G. (GB)
- Intervention**
- P504** **Exploring the feasibility and efficacy of a 12-week running program in individuals with chronic low back pain: A randomised controlled trial protocol**
Neason C. (AU)
- P505** **Ultrasound-guided autologous platelet-rich fibrin injections to reduce recurrent sacroiliac joint pain**
Hubbe U. (DE)
- Lumbar spine**
- P506** **Intrahecal morphine injection in anterior lumbar and lateral lumbar spine surgery**
Al Khawaja D. (AU)
- P507** **Isolated lumbar extension strength: A conservative management option for 33 patients not yet ready for surgery or hoping to delay an operation**
Deftmann T. (AU)
- P508** **Final long-term reporting from a randomized controlled investigational device exemption trial for lumbar artificial discs in single-level degenerative disc disease: 7-year results**
Zigler J. (US)
- P509** **A prospective clinical study comparing the PainDETECT and S-LANSS questionnaires in documenting neuropathic pain in patients with chronic low back pain and who have not had prior spinal surgery**
Whittle I. (AU)

New technology

- P510** **SMART implantable devices for spinal implants: A review on current and future trends**
Kim S.J. (AU)
- P511** **Endoscopic lumbar discectomy early results and complications an Australian perspective**
Madiouly J. (AU)
- P512** **Intertransverse fusion implant in an ovine posterolateral fusion model**
Pelletier M. (AU)
- P513** **Outcomes of restorative neurostimulation using ReActiv8 therapy in patients with chronic low back pain: Preliminary results from an independent interdisciplinary spinal centre**
Lijo C.E. (AU)
- P514** **Combined intra-operative real-time colour doppler and fluorescein assisted video-angiography guided surgical management of spinal dural arteriovenous fistulas - A case report**
Kelly R.S. (MY)
- P515** **Resection of intradural extramedullary meningioma using a minimally invasive double tubular access**
Hubbe U. (DE)
- Spinal deformity**
- P516** **Causation of kyphosis above a thoracolumbar construct using patient specific rods**
Faulks C. (AU)
- Spinal surgery**
- P517** **Return to sports following discectomy: Does a consensus exist?**
Baecker H. (AU)
- P518** **Vertebral body tethering functions as an internal brace for skeletally immature adolescent idiopathic scoliosis patients with moderate-to-severe coronal plane deformity**
Roser M. (AU)
- P519** **Simultaneous posterior instrumentation and anterior exposure using computer assisted navigation improves operative efficiency and maintains safety in lateral decubitus single-position anterior posterior fusion**
Buckland A.J. (AU)
- P520** **Clinical outcomes after a far lateral microdiscectomy**
Malham G. (AU)
- P521** **Single-position prone lateral lumbar interbody fusion increases operative efficiency and maintains safety in revision lumbar spinal fusion**
Buckland A.J. (AU)
- P522** **Intradural, calcified, soft spinal meningioma dictates the necessity of measuring Hounsfield Units on pre-operative CT**
Brooks M.R.D. (AU)

- P523** **Fusion rates in stand-alone lumbar hybrid reconstructions procedures is unaffected by cage design: A case cohort analysis**
Scott-Young M. (AU)
- P524** **The effect of varying levels of uncinectomy in cervical total disc replacement on range of motion at mid-term follow-up**
Celenza A. (AU)
- P525** **Vascular injury in anterior lumbar fusion surgeries**
Seex K. (AU)
- Other**
- P526** **Systematic review of the top 10 ranked spine articles in the last 10 years (2011-2021)**
Kim S.J. (AU)

POSTER LIST GENERAL

- P527 **Spinal epidural abscess in melioidosis**
Das G. (IN)
- P528 **Improvement of pulmonary function and reconstructed 3D lung volume after deformity correction for thoracic spinal post-tubercular kyphosis: A multicenter study**
Cao K. (CN)
- P529 **Rhabdomyolysis in lumbar spine surgery in Chinese: A case report**
Lam K.H.E. (HK)
- P530 **Rare complication associated with halo pin application: A case report**
Lam K.H.E. (HK)
- P531 **Unilateral versus Bilateral pedicle screw fixation in lateral lumbar interbody fusion: Analysis of radiographic and clinical outcomes**
Weng Y. (CN)
- P532 **Effects of the cage height and positioning on clinical and radiographic outcome of lateral lumbar interbody fusion**
Weng Y. (CN)
- P533 **Comparative radiological outcomes and complications of sacral-2-alar iliac screw versus iliac screw for sacropevic fixation**
Weng Y. (CN)
- P534 **GelMA hydrogel loaded umbilical cord mesenchymal stem cell derived exosomes for the treatment of intervertebral disc degeneration via the miR-320/SMAD3 pathway**
Weng Y. (CN)
- P535 **Biomechanical effects of new cement anchor combined with bone cement strengthening on the vertebrae: A finite element analysis**
Weng Y. (CN)
- P536 **Biomechanical study of oblique lumbar interbody fusion (OILF) augmented by different instrumentations: A finite element analysis**
Weng Y. (CN)
- P537 **Biomechanical effects of osteoporosis on the adjacent vertebral body and endplate after lateral lumbar interbody fusion - A finite element analysis**
Weng y. (CN)

Meetings, Satellite Symposia & Workshops

Monday 1 May



Additional Meetings



Room: Pan Pacific Hotel - Woodside 1 & 2

14.00 - 16.30 **Focus Group Meeting: ISSIS Phenotypes / Precision Spine Focus Group - Comprehensive deep phenotyping to benefit the Low Back Pain research community**
Hodges P. (AU), Cholewicki J. (US), Popovic J. (US), Lotz J. (US), Bailey J. (US),
Sowa G. (US), Foster N. (AU), Samartzis D. (US)

Monday

Tuesday

Wednesday

Thursday

Friday

Posters



Monday

Tuesday

Wednesday

Thursday

Friday

Posters

Meetings, Satellite Symposia & Workshops

Tuesday 2 May

Additional Meetings



Room: Pan Pacific Hotel - Woodside 1 & 2

09.00 - 12.30 **Focus Group Meeting: International taskforce on diagnosis and management of Lumbar Spine Stenosis**
Tomkins-Lane C. (CA), Wong A. (HK), Melloh M. (NZ)

Sponsored Satellite Symposium



Room: VIP Suite 2

12.30 - 14.00 **Where's the pain?**
Nociscan, the 21st Century solution & Low Back Pain

Programme:

- Company overview
- Foundational Science
- Evidence & Value
- Future

Sponsored Satellite Symposium



Room: VIP Suite 1

12.30 - 14.00

- **New surgical possibilities using Loop-X mobile robotic imaging**
Licina P. (AU)
- **How I maximize the utility of spine navigation for multiple indications and approaches**
Buckland A. (US)

Sponsored Satellite Symposium



Room: Red Desert Dreaming - Pan Pacific

12.30 - 14.00 **New treatment options for stable vertebral body fractures with an evidence based functional Orthoses**
Yokosuka K. (JP)

Sponsored Satellite Symposium



Room: Press Room

12.30 - 14.00 **The Future is now: Robotics and spine surgery**
Faculty: Anand N. (US), Awad M. (US), Edis D. (AU), Oh J. (SG)

Please join Medtronic and our esteemed faculty to learn more about Mazor X Stealth™ Edition, the latest addition to our Enabling Technologies Ecosystem for spine surgery. Led by experienced spine surgeons who have integrated the Mazor X Stealth™ Edition into their practices, the focus will be on understanding the concepts of robotic spine surgery, robotic surgical planning and the integration of the Mazor X Stealth™ Edition into your practice.

Sponsored Satellite Symposium



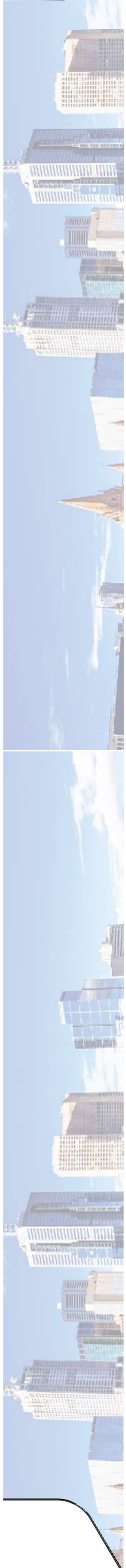
Room: Hospitality Suite 7

12.30 - 14.00 **Long-term evidence, radiograph classification, and clinical management of cervical disc arthroplasty**
Faculty: Phillips F. (US), Erturan J. (UK), Jacobs J. (US), Hansen M. (UK), Khachatrian A. (US)



Meetings, Satellite Symposia & Workshops

Wednesday 3 May



Sponsored Satellite Symposium



Room: VIP Suite 1

12:30 - 14:00

PTP: The evolution of the lateral approach
Deviren V. (US), McMains C. (US)

Sponsored Satellite Symposium



Room: Press Room

12:30 - 14:00

Navigation in spine surgery - Standard of care?
Faculty: Tee J. (AU), Limthongkul W. (TH), Peshatjiwar V. (IN)

Please join Medtronic and our esteemed faculty to learn more about the S8 Surgical Navigation System, part of Medtronic's Enabling Technologies Ecosystem for spine surgery. Led by experienced spine surgeons who will share their knowledge and experience, focusing on understanding the concepts of navigated spinal surgery, planning and integrating the S8 Navigation system into your practice.



Meetings, Satellite Symposia & Workshops

Friday 5 May



Sponsored Satellite Symposium



Room: Press Room

12:30 - 14:00

Robotic Navigation: A panel discussion on advanced technology for complex procedures

This panel will review and address current trends in the deformity and single position lateral spaces. The speakers will discuss their clinical experience with ExcelsiusGPS® robotic navigation as well as the associated advantages and benefits for these procedures. The discussion will include how this technology may have a potentially positive impact on patients. The workshop will conclude with a review of deformity and lateral cases, discussion and a live Q&A.

KOLs:

Choi J. (AU) & Kazemi N.J. (US)

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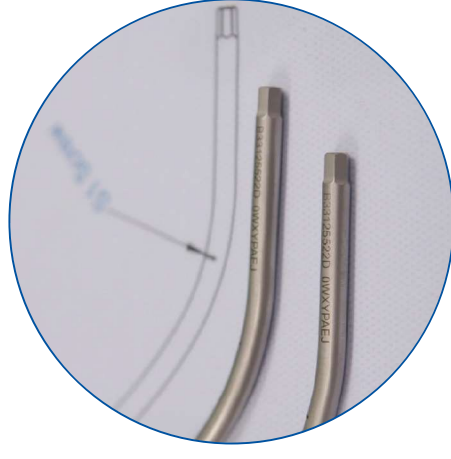
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3DMorphic



3DMorphic is a medical device company that utilises additive 3D printing and 'just-in-time' manufacturing to create personalised surgical solutions. Using vertically integrated manufacturing, 3DMorphic produces patient-specific surgical implants with unrivalled speed and precision. Our mission is to advance spine surgery with patient-specific devices that result in an even load distribution and prevent stress hotspots, leading to a more controlled fusion, stable fixation and superior patient outcomes. Any desired lordotic and scoliotic alignment corrections are also integrated into the design of 3DMorphic devices, empowering surgeons to perform planned and efficient surgeries. This technology ultimately enables 3DMorphic to continue reshaping the future of spinal surgery.

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Aclarion

Aclarion is a healthcare technology company focused on advancing the care of patients with chronic low back pain by combining the capabilities of magnetic resonance spectroscopy (MRS) with a proprietary, augmented-intelligence algorithm to noninvasively, objectively measure specific biomarkers associated with pain and structural integrity. Noctican, also known as Virtual DiscogramTM, is Aclarion's proprietary signal processing software and expert system, validated by published clinical studies, that transforms raw spectral MRS data into clear metabolic biomarkers to help physicians determine between painful and nonpainful discs of the lumbar spine.

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ADDITIVE SURGICAL



Additive Surgical was established in 2020 and is the first company in Australia to manufacture a full range of Off-The-Shelf 3D Printed Titanium Spine Implants. This includes CE Marked static cages, integrated cages and an innovative 3D printed porous pedicle screw system. The entire Additive Surgical team is dedicated and passionate about manufacturing the highest quality medical technology in Australia that positively impacts the lives of people globally.

www.additive-surgical.com

Australian Biotechnologies



Australian Biotechnologies is a specialist in allograft tissue processing. We deliver optimal solutions for all clinical biologic and allograft requirements, to supply allografts for a wide range of patient needs and surgical procedures. We supply allograft solutions for orthopaedic, spinal, dental and oral-maxillofacial surgeries both nationally and internationally, and our world-class manufacturing facilities and proprietary processing technology have become renowned as the gold standard of allograft production.

www.ausbiotech.com.au

www.linkedin.com/company/2660592

Baxter Healthcare



Baxter's portfolio of products and programs are foundational to the cadence of surgery, just as surgeons, nurses, and administrators are essential to the art of healing. Clinically-proven products allow surgical teams freedom to innovate and think creatively without restraint in the operating room to optimize patient outcomes.

www.advancedsurgery.baxter.com

www.twitter.com/baxter_intl



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As a leader in real-time surgical visualization and guidance, BK Medical provides surgeons with Active Imaging and data-driven insight — during the procedure. Our easy-to-use and intuitive systems seamlessly integrate into almost any surgical workflow. It's not just surgery. It's smarter surgery guided by BK Medical.

www.bkmedical.com

www.facebook.com/bkultrasound


Boston Scientific



Boston Scientific is dedicated to transforming lives through innovative medical solutions that improve the health of patients around the world.

Our work is guided by core values that define Boston Scientific culture and empower our employees. Transforming lives with less-invasive technologies engineered to diagnose and treat a wide range of medical conditions.

We're dedicated to collaborating with healthcare professionals to develop a broad portfolio of meaningful innovations that improve outcomes, reduce costs, increase efficiencies and—most importantly—help more people in more places around the world live longer, healthier lives.

 www.bostonscientific.com


Brainlab





Brainlab is a digital medical technology pioneer founded in 1989 and headquartered in Munich. The company employs more than 1800 people in 21 offices around the globe. Brainlab serves physicians, medical professionals and their patients in over 5800 hospitals in 117 countries.

Brainlab creates software-driven medical solutions that digitize, automate and optimize clinical workflows for neurosurgery, spine, trauma, craniomaxillofacial (CMF), general and vascular surgery as well as radiotherapy and radiosurgery. Core products center around surgical navigation, radiotherapy, digital operating room integration, and information and knowledge exchange. The Brainlab open framework operating system will allow third parties to develop medical applications to further advance the field of spatial computing and mixed reality.

Brainlab is dedicated to creating an impact in healthcare. The company connects opportunities from emerging digital technologies to transform healthcare at scale and help improve the lives of patients worldwide.

 www.brainlab.com

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Centinel Spine




Proven product solutions for over 30 years. At SPINEWEEK 2023, Centinel Spine will highlight its latest anterior column reconstruction technologies.

Centinel Spine® LLC is a leading global medical device company addressing cervical and lumbar spinal disease through anterior surgical access. The company offers a continuum of trusted, brand-name, motion-preserving and fusion solutions backed by over 30 years of clinical success—providing the most robust and clinically-proven technology platforms in the world for total disc replacement (prodisc®) and integrated Interbody™ fusion (STALIF®).

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Cerapedics

Cerapedics is an advanced orthobiologics company with the only biologic bone graft in spinal applications that incorporates a small peptide (P-15) as an attachment factor. i-FACTOR® Peptide Enhanced Bone Graft (P-15/ABM) is only the second FDA PMA approved bone graft on the market, and it's novel mechanism of action (Attach, Attach, Activate) has shown to be statistically superior to local autograft through an IDE trial on single-level ACDFs in overall clinical success at one year and maintained at two years.


 www.cerapedics.com




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Advancing the Science of Bone Repair

CGBIO

CGBIO provides essential and convenient products for use in clinics through its excellent biomaterial-based technology and variety of Co-work with clinical experts. CGBIO will contribute to patients and medical practitioners around the world through sustained R&D investment to develop leading edge bio products and solutions for improved efficacy and reduced treatment cost. Our door is open to anyone or any University, Research lab or Company interested in reconstruction of damaged human tissue. CGBIO will contribute all the resources and passions to lead improving quality of life and will become a company loved and trusted by the people.


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CGBIO
RESEARCH AND DEVELOPMENT

Depuy


DePuy Synthes, the Orthopaedics Company of Johnson & Johnson, provides one of the most comprehensive orthopaedics portfolios in the world that helps heal and restore movement for the millions of patients we serve. DePuy Synthes solutions, in specialties including spinal surgery, joint reconstruction, trauma, extremities, craniomaxillofacial, and sports medicine, are designed to advance patient care while delivering clinical and economic value to health care systems worldwide. Building on our proud product innovation and legacy of industry firsts, we are reimagining the orthopaedic landscape with new advancements in medical technologies and digital surgery across the entire continuum of care to Keep People Moving today and tomorrow.


 www.jnjmedtech.com/en-US/companies/depuy-synthes


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Double Medical Technology Inc.

Founded in China, Double Medical is a global health care solutions company. With thirteen worldwide subsidiary corporations and three hospitals, we are committed to improving quality of lives by our medical technologies and service in the area of orthopedics, wound management, neurosurgery, and general surgery.

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Elliquance

Elliquance, LLC manufactures patented Radiowave technology with innovative devices for orthopedic, neurosurgery, and pain management applications. Surgi-Max® Ultra permits precision tissue preservation, non-adherent bipolar effects and surgical versatility. Disc-FX® Discectomy System, Trigger-Flex® steerable bipolar handpiece and a full line of endoscopic spine instruments are examples of the surgical accessories offered for use with the Surgi-Max® Ultra energy source. elliquance focuses on spating healthy tissue while precisely treating pathology.


 www.elliquance.com


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Evolution Surgical

Evolution Surgical is an Australian owned company specialising in spinal fusion implants and custom instrumentation. We work closely with surgeons to design bespoke solutions to an endless range of clinical challenges and surgical preferences. Our vision is to play a key role in the ever-evolving spinal industry, we are committed to investing in leading technologies and innovative designs that continue to improve patient outcomes.

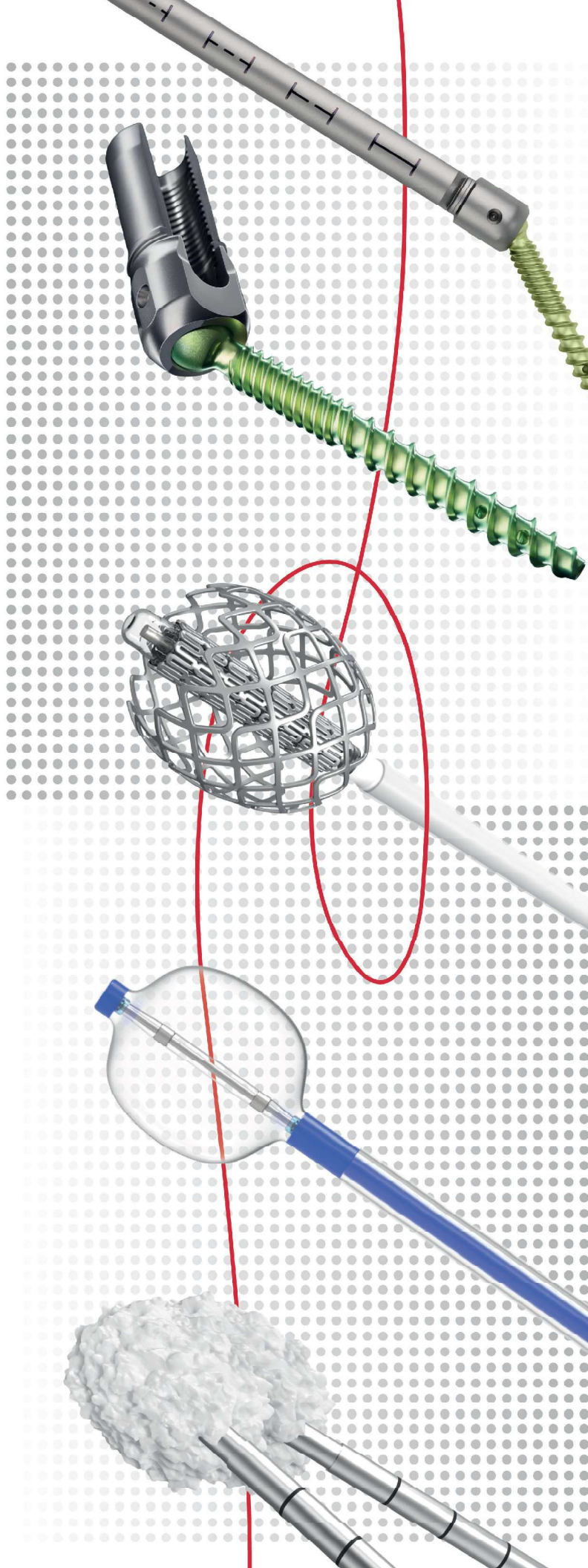
 www.evolutionsurgical.com.au

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We Combat Osteoporosis**


Not all products available in all markets

Fusetec



Fusetec's mission is to improve healthcare outcomes by advance manufacturing safe, affordable and effective surgical training models to upskill residents and continually advance surgeons' training. Fusetec models are fully operable, soft tissue and anatomically accurate. All models are validated by KOL and Universities prior to commercialisation.

In 2021, Fusetec constructed the world's first, non-cadaveric Advanced Surgical Training Clinic, in Australia. This 25-bed surgical training clinic, offering the perfect environment to safely teach skills, while demonstrating new tools and techniques. Contact fusetec to discuss your training needs.


 www.fusetec.com.au

FzioMed



FzioMed develops and commercializes absorbable surgical biomaterials based on its patented polymer science, for use in surgical applications including spine, orthopedics, tendon, peripheral nerve, gynecology and general surgery.



- Oxiplex® spine gel helps reduce adhesion formation and related symptoms such as pain.
- Oxiplex/AP® is designed for peritoneal surgery applications.
- Oxiplex/ILU® serves to separate surgically traumatized opposing tissue surfaces in the erine cavity.
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 www.fziomed.com

Globus Medical




Globus Medical, a leading musculoskeletal solutions company, is driving significant technological advancements across a complete suite of products ranging from spinal, trauma, and joint reconstruction therapies to imaging, navigation, and robotics. Founded in 2003, Globus' single-minded focus on advancing spinal surgery has made it the fastest growing company in the history of orthopedics. Globus is driven to utilize high-level engineering and technology to achieve pain-free, active lives for all patients with musculoskeletal disorders.

 www.globusmedical.com
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HicRen





Ningbo HicRen Biotechnology Co., Ltd. was established in 2011, located in Hangzhou Bay New Area, with operating branches in Shanghai and Tianjin. It is the first manufacturer in China, approved by CFDA, and CE for percutaneous curved vertebroplasty and kyphoplasty products (PCVP and PCVP). As the global leader in PCVP and PCRP technology, HicRen also has innovative products in the fields of interbody fusion and non-fusion, bone repair material series, sports medicine series, spinal implants, endoscopic series, and AI series, etc. We take the innovation of minimally invasive orthopedic technology as our mission, provide patients and doctors with more excellent solutions of minimally invasive surgery, and strive to become the most innovative company of minimally invasive orthopedics in the field of consumables and equipment.

 www.hicren.com

Integrity Implants




Integrity Implants is dedicated to accelerating minimally invasive spine surgery through its enabling technology with broad accessibility to previously underserved markets. Founded in 2016 and headquartered in Palm Beach Gardens, FL, USA, Integrity Implants is dedicated to delivering innovative spine products and solutions to surgeons and their patients around the globe. The company's flagship FlareHawk Interbody Fusion system, powered by its proprietary Adaptive Geometry™ technology, fundamentally respects a patient's neural, vascular, bony, and soft tissue anatomy, both during and after implantation.

 www.eu.accelusinc.com
 www.facebook.com/integrityimplants

Jayon Implants Private Limited



Established in 1999, Jayon Implants represents the next-generation orthopedic and spinal implants manufacturing company, delivering innovative technologies in the field of orthopedic and spine surgery. Jayon implants is well-positioned to become a leader in the rapidly evolving medical implant field. We are committed and dedicated to a continuous research & development process, to build and maintain robust product pipeline. We aim to help people lead a more active, productive and pain-free life by restoring mobility through highly differentiated surgical products.

 www.jayonimplants.com

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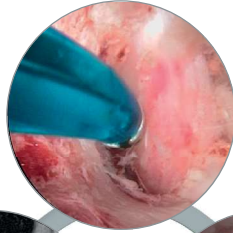
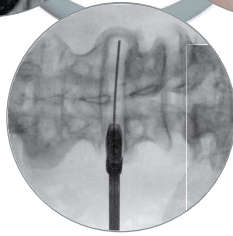
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Company Profiles

Joimax



joimax® is the global leader in design, development, and delivery of minimally invasive endoscopic solutions for spinal pathologies, empowering spinal surgeons worldwide. Made in Germany, our comprehensive, end-to-end solutions include endoscopic surgery devices and instrumentation, digital navigation systems, and consumables. Our innovative, high performance product portfolio addresses a broad range of surgical procedures such as spinal decompression, stabilization, and pain therapy. Leading brands include TESSYS®, iLESSYS®, MULTIZYTE®, infENIS®, Percusy®, EndoLIF® and NAVENTO®.

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Journal of Spine Surgery

The Journal of Spine Surgery is an open access, peer-reviewed, quarterly journal, dedicated to the field of spine surgery, science and clinical outcomes. The primary objective of JSS is to provide critical analysis and a comprehensive overview of contemporary topics within the field of spine surgery. Each issue will welcome relevant spine topics through the categorized sections: Original Article, Review Article, Case Reports, Editorial Commentary, Guidelines, and Evidence Update. The second objective of the JSS is to facilitate the discussion and sharing of pertinent clinical information amongst surgeons and physicians concerned with the surgical treatment of spinal disorders. Articles will be published both in print and online, which will be featured with surgical videos. The aim of the Journal is to provide a forum for the dissemination of progresses in all areas related to spinal disorders and surgical techniques worldwide.

www.jss.amegroups.com








KiMedix

As KiMedix we are offering turnkey solutions for manufacturing custom scoliosis braces. Our solutions include AI supported C.A.D and C.A.M software, 3D brace library, proprietary 3D printer, material and training to enable our partners to build world class braces which are affordable and locally manufactured.

www.kimedix.de

Korthotics & DMO

Korthotics specialises in custom-made orthoses to suit both adult and paediatric patients presenting with many different conditions since 2004. Korthotics is the Australian distributor of the Dynamic Movement Orthotics (DMO) and Boston Brace Spinal System. DM Orthotics is a world leading provider of medical rehabilitation and sports performance products. We provide elastic fabric, dynamic movement orthoses to over 25 countries helping to improve the lives of people who face a range of physical challenges.


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Mectron

Our vision is to improve patients' lives through technological innovation. Mectron was founded in 1979, and is headquartered in Carasco, Italy. With over 40 years of research and continuous innovation, Mectron's patented PIEZOSURGERY® technology has revolutionized the way bone surgery is performed. Today, Mectron's PIEZOSURGERY® plus and line of inserts provide surgeons with cutting-edge technology and surgical solutions aimed at improving patient outcomes. The expansive postoperative benefits of PIEZOSURGERY® have been experienced by distinguished surgeons in over 80 countries across our globe.

In the neuro and spine surgical fields, PIEZOSURGERY® allows for superior surgical control, unmatched precision and maximum safety. Piezosurgery is proven to preserve the surrounding dura, nerves and vessels promoting preservation and sustained integrity of the spinal column.


 www.mectron.com



Leica Microsystems

Leica Microsystems develops and manufactures microscopes and scientific instruments for the analysis of microstructures and nanostructures. Widely recognized for optical precision and innovative technology, the company is one of the market leaders in compound and stereo microscopy, digital microscopy, confocal laser scanning and super-resolution microscopy with related imaging systems, electron microscopy sample preparation, and surgical microscopy.

In medical applications, Leica support you with premium optics that deliver crisp, bright, and consistent visualization. To further augment your view, our premium neurosurgery and ophthalmology microscopes are also designed as upgradeable imaging platforms. Easily integrate supplementary digital imaging and recording technologies at any time and ensure you have the visualization you need today, and tomorrow.


 www.leica-microsystems.com



Medacta International

Medacta is specialized in the design, production, and distribution of innovative orthopedic products, as well as in the development of accompanying surgical techniques. Established in 1999 in Switzerland, Medacta is active in joint replacement, spine surgery, and sports medicine. Medacta is committed to improving the care and well-being of patients and maintains a strong focus on healthcare sustainability. Medacta's innovation, forged by close collaboration with expert surgeon globally, began with minimally invasive surgical techniques and has evolved into personalized solutions for every patient.

Through the M.O.R.E. Institute, Medacta supports surgeons with a comprehensive and tailored educational program.

 www.medacta.com



Matrix Medical Innovations

Matrix Medical Innovations (Matrix) is an Australian medical device company committed to delivering high quality products and clinical support to the spine market. Our portfolio includes spinal implants, spinal endoscopy, biologics, a wide range of consumable products, and remote monitoring wearable devices.

Our mission is to provide simple solutions for complex problems in health care. We aim to do this by helping develop and source new medical technologies and bringing them to the Australian market. Working alongside surgeons and delivering these technologies, the overall goal is to provide high quality products and clinical support to help improve patient outcomes.

 www.matrixmi.com.au



Medtronic

We lead global healthcare technology. Our Mission — to alleviate pain, restore health, and extend life — unites a global team of 90,000+ people. Transforming the lives of two people every second, every hour, every day. Medtronic. Engineering the extraordinary.

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Discover OR Solutions

ProAxis®

Spinal Surgery Table



Levó®

Modular Head Positioning System



The ProAxis® Spinal Surgery Table and Levó® Modular Head Positioning System are designed to provide surgeons with the access, visibility and precise control needed for a variety of spinal surgery procedures. Find out more at mizuhoosi.com

mizuhoosi.com



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medi, based in Bayreuth, Germany, is one of the world's leading manufacturers of medical aids. Following the motto "medi. I feel better", around 3,000 employees worldwide.



www.medi.de

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Morpheus AG



Morpheus AG's goal is to become a leading manufacturer of highly innovative state-of-the-art surgical instruments. To achieve this, we permanently challenge the status quo by redefining the standards for such devices. Together with surgeons all over the world, we design and develop these next generation instruments for maximum safety, efficiency and effectiveness in the operating theatre. At SpineWeek 2023, we are pleased to launch our New Gen 2 REBELLION - The Ultimate Bone Removal System.

www.morpheus.com.ag

www.mectron.com



Mercian Surgical Limited

Mercian are a UK Medical Device company established since 1968 with over 50 years of experience in innovative and specialized High-Quality Spinal Instrumentation.

We are delighted to present at SpineWeek a comprehensive range of Spinal Instrumentation for applications in the areas of Lumbar, Cervical & Anterior Spinal Surgery.

During the Meeting we are delighted to present our specialist programme of Spinal Instruments and Retractor Systems for Cervical & Lumbar Spinal Surgery including the popular McCulloch Micro Discectomy Retractor and Black Belt ACD Cervical Retractor.

We have a specialist Lumbar and Cervical Spine instrument sets featured on our stand with a comprehensive "toolkit" of all the instruments a Surgeon requires for Lumbar and Cervical Spine Surgery.

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We are NATON MEDICAL AUS PTY LTD, located in Melbourne. Naton Medical Group is a multinational company engaged in research and development, production, OEM and sales of orthopedic medical devices. We have 20 factories in China, Germany and Finland that produce raw materials and products. The company's brands include INON, BRICON, PINA, IRENE etc.

www.english.naton.cn

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MIZUHO | OSI



Mizuho OSI

Mizuho OSI® improves the surgical experience through advanced patient positioning. With products like the ProAxis® Spinal Surgery Table and the Levo® Head Positioning System, surgeons are able to precisely adjust and align the patient's spine throughout surgery as needed.

ProAxis uses a unique hinge technology to support controlled flexion and extension of the lumbar spine. With features that include a fixed-position surgical site during hinge articulation, two memory settings to store the table's position, and radiolucent hinge, the ProAxis Table enhances surgical workflow and efficiency.

Our newest product, Levo, provides fluid yet controlled motion for safe, fast, and easy head positioning. The Trios® Surgical Table System is a modular platform featuring a two-column base with three interchangeable table tops that creates the flexibility needed to support a variety of spine, imaging, and orthopedic procedures.

Since introducing the first dedicated Spinal Table System in 1992, Mizuho OSI® has revolutionized the industry by providing surgeons with greater surgical access, unobstructed imaging, and enhanced safety.

www.mizuhoosi.com

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NBCE

The National Board of Chiropractic Examiners (NBCE), including the International Board of Chiropractic Examiners (IBCE), is the international testing agency for the chiropractic profession. The NBCE develops, administers and scores standardized exams that assess knowledge, higher-level cognitive abilities and problem-solving in various basic science and clinical science subjects.

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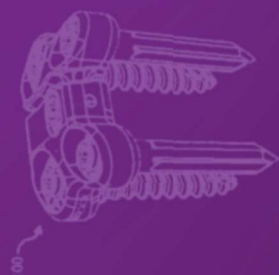
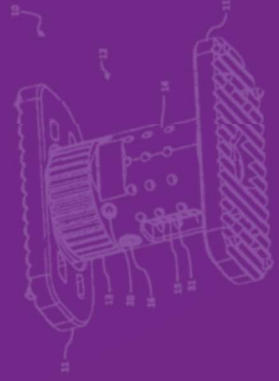


20 years ago, NuVasive set out to make less-invasive spine surgery more reproducible and improve patient care. Today, with ~300,000 procedures performed, 200+ dedicated educational courses hosted, 500+ peer-reviewed publications and 60+ products launched, we believe we created the best procedure in spine—**XLIF**.

Learn more at the NuVasive booth.

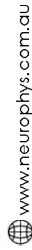
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Neurophysiology Services Australia

We are a Sydney based neurophysiology company specialising in intra-operative neuro monitoring (IONM) for complex spine, vascular & brain surgeries across Australia and New Zealand.



www.neurophys.com.au



Orthofix

Orthofix Medical Inc. is a global medical device company with a spine and orthopedics focus. The Company's mission is to deliver innovative, quality-driven solutions as we partner with health care professionals to improve patient mobility. Headquartered in Lewisville, Texas, Orthofix's spine and orthopedics products are distributed in more than 60 countries via the Company's sales representatives and distributors.



www.orthofix.com



NuVasive

NuVasive, Inc. is the leader in spine technology innovation, with a mission to transform surgery, advance care, and change lives. The Company's less-invasive, procedurally integrated surgical solutions are designed to deliver reproducible and clinically proven outcomes. The Company's comprehensive procedural portfolio includes surgical access instruments, spinal implants, fixation systems, biologics, software for surgical planning, navigation and imaging solutions, magnetically adjustable implant systems for spine and orthopedics, and intraoperative neuromonitoring technology and service offerings. With more than \$1 billion in net sales, NuVasive operates in more than 50 countries serving surgeons, hospitals, and patients. For more information, please visit www.nuvasive.com.



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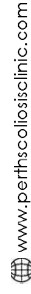


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Perth Scoliosis Clinic

Our company is dedicated and passionate – we are committed to managing children, teenagers and adults with scoliosis through individualised Physiotherapeutic Scoliosis Specific Exercise (PSSE) programs, bracing and other evidence-based conservative management.



www.perthscoliosisclinic.com



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Origin Biologics

Origin Biologics is a regenerative medicine company that develops and delivers innovative allograft solutions designed to support and maximize the body's regenerative and healing potential.



www.originbio.com



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PNG Angels

PNG Angels is an Australian registered charity, founded in 2019 by Dr Marc Coughlan. Our organisation is driven by a deep commitment to health equity, and a belief in the powerful impact of neurosurgery to allow people to live full and meaningful lives.

Currently only a handful of neurosurgeons are serving over 9 million people in Papua New Guinea (PNG), and the people of this developing nation face enormous barriers to access. Our goal is to change that.

Our team of volunteer neurosurgeons, anaesthetists, and nurses conduct spine and cranial surgeries on philanthropic missions to Port Moresby General Hospital. Often these surgeries involve rescue/ life-threatening tumours. Without these surgeries, many patients would not survive. We also provide intensive training to equip local teams with the skills needed to perform surgeries independently.



www.pngangels.org.au



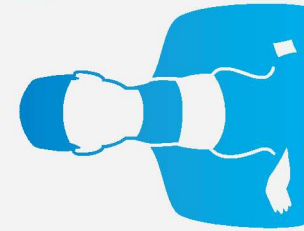
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To learn more about the M6 disc, visit
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Prism Surgical



At Prism Surgical we are a team of innovative thinkers who work to bring to market Australian-born innovation and invention. Our vision is to create solutions that are embraced by those passionate about the field of spine surgery, and we work tirelessly in pursuit of turning that vision into reality. We are proud to be a qualified and certified manufacturing of spinal devices, which allows us to provide our customers with the very best products and services.

www.prismsurgical.com.au

Realists

Realists Training Technologies GmbH is a leading provider and manufacturer of technologies and services in the field of spinal surgery.

www.realists.de

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Realists

ScoliCare



ScoliCare is dedicated to pioneering and delivering the world's best scoliosis treatment through innovation, education and patient-centered care.

With five Clinics in Australia, and Providers in Australia and around the world, our focus is on early detection and non-surgical treatment options to get patients the right treatment at the right time. ScoliCare leads research and develops new technologies such as proprietary 3D scanning technology (BraceScan), scoliosis rehabilitation orthotic (ScoliRoll), and a unique custom 3D scoliosis bracing system (ScoliBrace®).

We also offer a free confidential X-Ray review service, as well as welcome co-managing of patients with health professionals.

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SeaSpine



SeaSpine® is a global medical technology company focused on the design, development and commercialization of surgical solutions for the treatment of patients suffering from spinal disorders. SeaSpine has a comprehensive portfolio of orthobiologics, spinal implants, and surgical navigation system solutions. Please visit www.seaspine.com for more information.

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RIWOspine GmbH



RIWOspine has been pioneering endoscopic spine surgery over the last 20 years which makes the company one of the most experienced partners and a global leader for full-endoscopic spine surgery and interventional percutaneous pain therapy.

RIWOspine's standardized techniques are based on clinical validation and in-house development of all innovative products and instruments to make surgical procedures safe and successful.

Our new generation of medical devices are designed to fulfill the highest requirements in the OR and to make each full-endoscopic spine surgery more convenient.

RIWOspine GmbH.

www.riwospine.com

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Shanghai Bojin Electric Instrument & Device Co., Ltd.



Bojin, dedicated in orthopedic products, has independently developed and produced a series of products such as medical electric saw and drill, external fixator, portable X-ray fluoroscopy instrument and fracture treatment instrument. Adhering to the enterprise philosophy of quality first, customer first, excellence and innovation, we will continue to deepen the medical device industry, accumulate advanced technology and management experience at home and abroad, and devote ourselves to improving product quality and providing users with better services.

www.cn.bojin-medical.com

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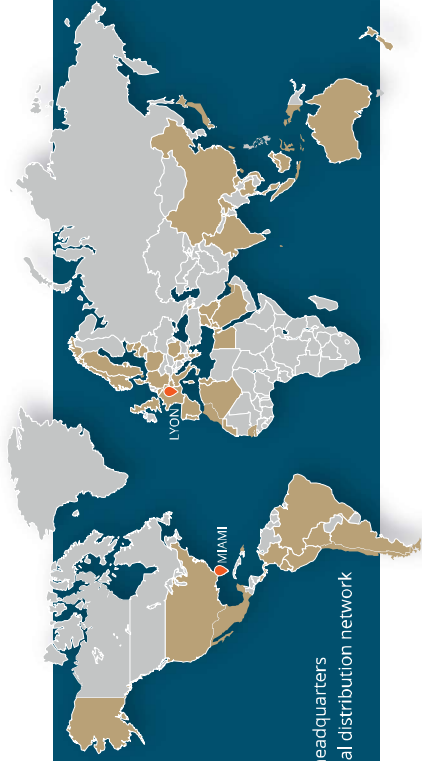
Distribution in over 50 countries



14 patent families in France and abroad



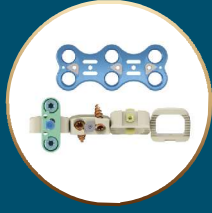
Medical devices certified CE0197, CE2803, CE2797, CE0459



The acquisitions of Distimp in 2021 and Spine Innovations in 2022 represent an incredible opportunity for SpineWay to widen further its product offer and address additional pathologies, bundling portfolios and territories.

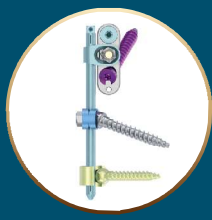


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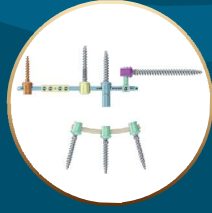
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Spineway Group

Independent French company created in Lyon in 2005. Spineway designs, develops and markets implants and instruments for spinal surgery worldwide.


Spineway has developed product families towards treatment of degenerative or trauma pathologies in open or minimal invasive approach, treatment of spinal deformity of adults and young children.

The acquisitions of Distimp in 2021 and Spine Innovations in July 2022 represent an incredible opportunity for Spineway to expand its product offer and address new pathologies, bundling portfolios and territories. The recent acquisitions show the new direction of Spineway group towards innovation, premium product line up and penetration of high demanding markets.

 www.spineway.com


 www.spine-innovations.com

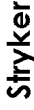
 www.linkedin.com/company/spineway

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Symmetry Surgical

Symmetry Surgical, an Aspen Surgical Company, are a global surgical instrumentation company that manufactures and supplies high quality and innovative surgical instruments across all surgical specialties. Symmetry Surgical APAC division sources these surgical instruments directly from factories in USA & Germany, streamlining supply, which has enabled distribution of these trusted heritage branded instruments (Greenberg, Kerrisons, Olsen, Karlin) at reasonable pricing to Australian customers.

 www.symmetrysurgical.com



Company Profiles

TeDan Surgical Innovations, Inc.



TeDan Surgical Innovations (TSI) designs and manufactures specialty surgical products for use in orthopedic, neuro, thoracic and spine surgeries. TSI offers cervical and lumbar retractor systems for ACDF and minimally invasive lumbar fusion procedures. All of our retractor systems have patented ergonomically designed blade locking mechanism which simplifies their use in surgery.

- www.tedansurgical.com
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TIDI Products



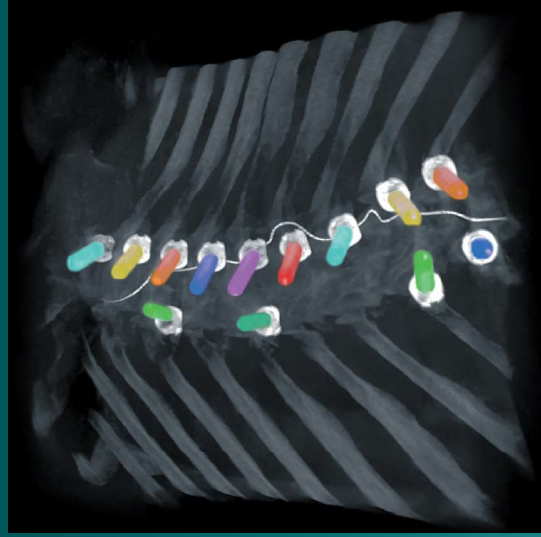
TIDI Products provides forward-looking solutions to healthcare professionals—solutions that help reduce the risk of contamination and deliver the highest-quality patient care. Every day, caregivers turn to TIDI® For the latest in user-friendly, compliance-enhancing, and risk-reducing solutions. The TIDI Products portfolio of brands includes Posey®, C-Armor®, Sterile-Z®, PenBlade®, TIDiShield®, Grip-Lok®, Zero-Gravity®, and AquaGuard®. To learn more about our company, our history, and our products, please visit our website.

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