

**E-POSTER**

# E-POSTER

## ADULT SPINAL DEFORMITY

- EP01-01** A Validation Study of 4 Preoperative Surgical Planning Tools in Terms of Proximal Junctional Kyphosis and Clinical Outcome in Adult Spinal Deformity Surgery  
Se-Jun Park (Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea)
- EP01-02** Uppermost Instrumented Vertebra-Pelvic Tilt Angle: A New Radiographic Parameter for Prediction of Proximal Junctional Failure in Patients Undergoing Thoracolumbar Fusion for Adult Spinal Deformity  
Se-Jun Park (Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea)
- EP01-03** Midline Muscle-Sparing Approach for Circumferential Minimally Invasive Spine Surgery (cMIS) in Adult Spinal Deformity (ASD) Correction  
Neel Anand (Cedars Sinai Medical Center, USA)
- EP01-04** An Anterior Supplemental Screw Can Prevent Anterior Cage Migration in Oblique Lateral Interbody Fusion at L5-S1  
Hee-Woong Chung (Ajou University Hospital, Korea)
- EP01-06** Defining Whole Spine Sagittal Alignment Parameters in Normal 3666 Population Using Machine Learning  
Sung Hyun Noh (Ajou University Hospital, Korea)
- EP01-07** Defining Spino-Pelvic Alignment in Adult Population over 60 Years Old: Prospective Analysis of 214 Volunteers  
Sung Hyun Noh (Ajou University Hospital, Korea)
- EP01-08** Surgical Sequence in Anterior Column Realignment with Posterior Osteotomy Is Important for Correction Degree of Adult Spinal Deformity  
Xiongjie Li (Kyung Hee University Hospital at Gangdong, Kyung Hee University, China)

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- EPO1-09**    **The Criteria of Severe Dynamic Sagittal Imbalance in Adult Spinal Deformity and Its Importance**  
 Sung-Min Kim (Kyung Hee University Hospital at Gangdong, Kyung Hee University, Korea)
- EPO1-10**    **Surgical Strategy-Oriented Classification for the Patients with Severe Dynamic Sagittal Imbalance**  
 Sung-Min Kim (Kyung Hee University Hospital at Gangdong, Kyung Hee University, Korea)
- EPO1-11**    **Analysis of the Cement Distribution Pattern and Other Risk Factors that Affect the Incidence of Recompression Fractures of Vertebral Bodies after Vertebroplasty or Kyphoplasty**  
 Siyeon Kim (Gachon University, Gil Medical Center, Korea)
- EPO1-12**    **Posterior Thoracic Interbody Fusion - When Is It Useful**  
 Min-Gyu Lee (Keimyung University Dongsan Hospital, Korea)
- EPO1-13**    **Sagittal Parameters of Spine and Pelvis in Young Adults Using the Eos Imaging System: Prospective Study of 92 Asymptomatic Subjects**  
 Min-Gu Jang (Konyang University Hospital, Korea)
- EPO1-14**    **Surgical Treatment of Kimmerle Anomaly: Early Research Results**  
 Mansur Aliev (Samarkand State Medical University, Uzbekistan)
- EPO1-15**    **Risk Factor Analysis of Distal Junctional Failure after Long Level Posterior Cervical Surgery and Instrumentation**  
 Donghun Kim (Eunpyeong St. Mary's Hospital, Korea)

## BIOLOGICS

- EPO2-01**    **Which Model Is Advantageous for Observing Apoptosis or Autophagy, Saline Injection, or External Fixator in Intervertebral Disc Degeneration?**  
 Abdul Khaleque (Catholic University of Korea, Bangladesh)

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## CERVICAL DEGENERATIVE

- EPO3-01** Cervical Kinematic Change after Posterior Full-Endoscopic Cervical Foraminotomy for Disc Herniation or Foraminal Stenosis  
Chi Heon Kim (Seoul National Univeristy Hospital, Korea)
- EPO3-02** Establishing a Relationship Using CT between Facet Distraction and Clinical Outcomes after ACDF  
JooYoung Lee (Dong-A Medical Center, University of Dong-A College of Medicine, Korea)
- EPO3-04** Does Posterior Cord Compression by Ligamentum Flavum Adversely Affect Clinical Outcome of Anterior Cervical Discectomy and Fusion?  
Sehan Park (Asan Medical Center, University of Ulsan College of Medicine, Korea)
- EPO3-05** Posterior Preventive Foraminotomy before Laminectomy Com-Bined with Pedicle Screw Fixation May Decrease the Incidence of C5 Palsy in Complex Cervical Spine Surgery in Patients with Severe Myeloradiculopathy  
Yong-Ho Lee (Yonsei University College of Medicine, Korea)
- EPO3-07** Does Titanium Mesh Cage Location Affect Subsidence after Single-Level Anterior Cervical Corpectomy and Fusion? A Minimum 2-Year Follow-Up Study  
Sung Hyun Noh (Ajou University Hospital, Korea)
- EPO3-08** Morphologic Change of Corticocancellous Allograft Used for Anterior Cervical Discectomy and Fusion  
Jun-Young Choi (Dongguk University Ilsan Hospital, Korea)
- EPO3-09** Which Radiographic Parameter Can Aid in Deciding Optimal Allograft Height for Anterior Cervical Discectomy and Fusion?  
Jun-Young Choi (Dongguk University Ilsan Hospital, Korea)
- EPO3-10** Surgical Outcomes of Extensive Dome-Like Laminoplasty Using En Bloc Resection of C2 Inner Lamina for Patients with Severe Cord Compression Behind C2 Body  
Se-Hwan Park (Kyung Hee University Hospital, Korea)

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- EPO3-12**    **Bicortical Laminar Screws for Posterior Fixation of Subaxial Cervical Spine: A Radiologic Analysis with Computed Tomography Images**  
Eugene Park (Kyungpook National University Hospital, Korea)
- EPO3-13**    **Identifying Risk Factors for Prevertebral Soft Tissue Swelling after Single-Level Anterior Cervical Discectomy and Fusion (ACDF)**  
Byeong-Jin Ha (Hanyang University Guri Hospital, Korea)
- EPO3-14**    **More than Three Continuous Segments of Ossification of Posterior Longitudinal Ligament Is Protective Against Postoperative Kyphosis Progression Following Laminoplasty**  
Sungjae An (Korea University Anam Hospital, Korea)

## EMERGING TECHNOLOGIES & TECHNIQUES

- EPO4-01**    **Screw Placement for Extremely Small Lumbar Pedicles in Scoliosis**  
JooYoung Lee (Dong-A Medical Center, University of Dong-A College of Medicine, Korea)
- EPO4-04**    **3D Printing in Spinal Surgery: Current and Future**  
Eugene Park (Kyungpook National University Hospital, Korea)
- EPO4-07**    **Role of Icotec Carbon Fiber Implants for Spine Tumour Disease - A Multicentre Singapore Experience**  
Naresh Kumar (National University Health System, Singapore)
- EPO4-08**    **Deep Learning Model for Grading Metastatic Epidural Spinal Cord Compression on Staging CT**  
Naresh Kumar (National University Health System, Singapore)
- EPO4-09**    **Deep Learning Model for Classifying Metastatic Epidural Spinal Cord Compression on MRI**  
Naresh Kumar (National University Health System, Singapore)

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**EPO4-10** Is It Necessary to Extend Fusion Segment When We Meet Screw Loosening and Nonunion? The Novel Technique of Short Segment Posterior Pedicle Screw Fixation Using Massive Bone Chip Insertion

Chang Duk Yuk (Asan Medical Center, University of Ulsan College of Medicine, Korea)

### ENDOSCOPIC TECHNOLOGIES & TECHNIQUES

**EPO5-01** Full Endoscopic of Interlaminar Approach for Bilateral Decompression in Lumbar Spinal Canal Stenosis : Evaluation of Clinical and Radiographic Outcome 1 Year Follow Up

Farid Yudoyono (Hasan Sadikin Hospital, Faculty of Medicine, Universitas Padjadjaran, Indonesia)

**EPO5-02** Uniportal Full Endoscopic Spinous Process Preserving Laminectomy for Bilateral Decompression in Cervical Stenotic Myelopathy. (5 Level Endoscopic Decompression, 2 Disease Entity, CSM/OPII)

Hyun-Jin Ma (Daegu Wooridul Spine Hospital, Korea)

**EPO5-03** Risk Factors Analysis for Inferior Clinical Outcome and Recurrence after Full-Endoscopic Interlaminar Discectomy (FEID) for Lumbar Disc Herniation; A Prospective Observational Study

Jungwoo Hur (Eunpyeong St.Mary's Hospital, The Catholic University of Korea, Korea)

**EPO5-05** Two Cases in Which FED to the Thoracic Disc Was Performed without Drilling Bones

Ryoo Fujisawa (Teine Keijinkai Hospital, Japan)

**EPO5-06** Oblique Lumbar Interbody Fusion with Selective Biportal Endoscopic Posterior Decompression for Multilevel Lumbar Degenerative Disease

Ki-Han You (Hallym University College of Medicine, Kangnam Sacred Heart Hospital, Korea)

**EPO5-07** Removal Technique of Degenerative Epidural Cyst with Biportal Endoscopic Surgery

Dongyun Kim (Saeum Hospital, Korea)

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- EPO5-09 Unilateral Biportal Endoscopic Extended Decompression of Extraforaminal Stenosis from the L5 Foramen to the Sacral Ala: Technical Note and Clinical Outcome**  
Hee Chang Kwon (Wiltse Memorial Hospital, Korea)
- EPO5-10 A Preliminary Report of Foraminal Decompression in Adult Isthmic Spondylolisthesis :Pathoanatomy and Endoscopic Posterior Approach**  
Dae-Jung Choi (Himnaer Hospital, Korea)
- EPO5-11 Navigation Guided Endo-TLIF in Degeneration Lumbar Lesion And: Tips and Tricks**  
Yi-Hung Huang (Chia Yi Christian Hospital, Taiwan)
- EPO5-12 The Effect of Thrombin-Containing Local Hemostatics on Postoperative Spinal Epidural Hematoma in Biportal Endoscopic Spinal Surgery**  
Yongho Kim (Seoul Sacred Heart General Hospital, Korea)
- EPO5-13 Endoscopic Correction of Spinal Sagittal Imbalance**  
Won Joong Kim (Synergy Orthopedic Clinic, Korea)
- EPO5-14 Endoscopic Surgery + Flexible Rod = Awesome Results!**  
Sangyoup Han (Suwon Leon Wiltse Memorial Hospital, Korea)
- EPO5-15 Percutaneous Endoscopic Thoracic Discectomy ; Case Report of Highly Migrated Thoracolumbar Disc Herniation**  
Youngmin Lee (Anyang Wiltse Memorial Hospital, Korea)
- EPO5-16 Full Endoscopic Transpedicular Approach for Highly Migrated Ruptured Disc**  
Yongsoo Choi (Wooridul Spine Hospital, Korea)

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## LUMBAR DEGENERATIVE

- EPO6-01** Cauda Equina Syndrome due to Huge Lumbar Disc Herniation  
Ji Soo Moon (Daegu Wooidul Spine Hospital, Korea)
- EPO6-02** Remodeling of the Spinal Canal after Anterior Lumbar Interbody Fusion(ALIF) in Central Spinal Stenosis: Clinical and Radiological Findings  
Dong Hyun Lee (The Leon Wiltse Memorial Hospital, Korea)
- EPO6-04** Effects of the Severity of Stenosis on Clinical Outcomes of Indirect Decompression Using Minimally Invasive Oblique Lumbar Interbody Fusion  
Dong-Ho Kang (Seoul National University College of Medicine and Seoul National University Hospital, Korea)
- EPO6-05** Risk Factors of New Vertebral Fracture after Vertebroplasty for Osteoporotic Vertebral Compression Fracture  
Jong-Hyeok Park (Incheon St. Mary's Hospital, The Catholic University of Korea, Korea)
- EPO6-06** Comparison of Minimally Invasive and Open Tlif Outcomes with more than Seven Years of Follow-Up  
Yoonjoong Hwang (Korea University Ansan Hospital, Korea)
- EPO6-07** Ankle and Toe Weakness Caused by Ligamentum Flavum Calcified Cyst: A Case Report and Literature Review  
Ho-Young Jung (Eunpyeong St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Korea)
- EPO6-08** Recanalization of External Iliac Artery Occlusion in Patient with Spinal Stenosis Using Medications: A Case Report  
Geon-U Kim (Eunpyeong St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Korea)
- EPO6-09** The Impact of Instrumented Lumbar Fusion Surgery on Psychiatric Problems in Elderly Patients with Degenerative Spinal Stenosis  
Hee Jung Son (Nowon Eulji Medical Center, Eulji University School of Medicine, Korea)



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- EPO6-10** **Effect of Short-Level Oblique Lumbar Interbody Fusion Correcting Sagittal Imbalance**  
Dong-Ho Kang (Seoul National University College of Medicine and Seoul National University Hospital, Korea)
- EPO6-11** **Analysis of Risk Factors for Early Adjacent Segment Disease Who Underwent Revision Surgery within 5 Years after Lumbar Spinal Fusion**  
Taejong Jeong (Sahmyook Seoul Medical Center, Korea)
- EPO6-12** **The Role of the Spine and Pelvic Balance in Determining the Tactics of Surgical Treatment of Lumbar Spondylolisthesis**  
Akobir Ibragimov (Republican Specialized Scientific and Practical Medical Center of Neurosurgery, Uzbekistan)
- EPO6-13** **Comparison of Radiologic & Clinical Outcome of Posterior Lumbar Interbody Fusion Using Unilateral Cage with Unilateral Facetectomy and Contralateral Facet Fusion Versus Conventional Posterior Lumbar Interbody Fusion Using Bilateral Cages**  
Suk Hyun Hwang (Seoul Red Cross Hospital, Korea)
- EPO6-14** **Spinal Stenosis Cases of Achondroplasia Patient, Case Review**  
Seung Jin Choi (Korea University Guro Hospital, Korea)
- EPO6-15** **Open Midline Decompression (OMD) with Ligament Reconstruction for Multi-Level Degenerative Lumbar Spinal Stenosis in Elderly Patients over the Age of 80S**  
Sang-Ho Lee (Cheongdam Wooridul Spine Hospital, Korea)
- EPO6-16** **Impact of Social Distancing on Degenerative Spinal Diseases during the Covid-19 Pandemic Period**  
Jun-Hoe Kim (Seoul National University Hospital, Korea)
- EPO6-17** **5-Year Radiological Outcomes Post an Interlaminar Device Insertion for Symptomatic Lumbar Spinal Stenosis**  
Naresh Kumar (National University Health System, Singapore)

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**EPO6-18** A Modified Posterior Lumbar Interbody Fusion Technique Using a Steerable 3D-Printed Titanium Cage with Simultaneous Spinous Process Fixation Device: Single-Institution Case Series

Byeong-Jin Ha (Hanyang University Guri Hospital, Korea)

**EPO6-19** Long-Term Clinical and Radiographic Outcome of Instrumented Facet Fusion of Lumbar Spine

Dong Min Seo (Korea University Guro Hospital, Korea)

## MATERIAL SCIENCE

**EPO7-01** Hydrogel Reservoir as "Self-Contained" NP Cell Delivery Vehicle for Immunoregulation to Repair Degenerated Intervertebral Disc

Juehan Wang (West China Hospital, Sichuan University, China)

**EPO7-02** Does i-Factor™ Bone Graft Enhances Fusion Rate after Anterior Cervical Discectomy and Fusion?

Jungwoo Hur (Eunpyeong St.Mary's Hospital, The Catholic University of Korea, Korea)

**EPO7-03** Reliability of the EOS Imaging System for Assessment of the Spinal and Pelvic Alignment in the Sagittal Plane

Sang Bum Kim (Sejong Cheung Nam University Hospital, Korea)

**EPO7-04** Mid Term Efficacy and Safety of Escherichia Coli Derived Rbmp 2/ Hydroxyapatite Carrier in Lumbar Posterolateral Fusion: A Randomized, Multicenter Study

Minjoon Cho (SMG-SNU Boramae Medical Center, Korea)

**EPO7-05** Preliminary Evaluation of a New Vertebroplasty Material in Tibial Defects of Ovariectomized Rat Model

Je Hoon Jeong (Soonchunhyang University, Bucheon Hospital, Korea)

**EPO7-06** Novel 3D Printable PEEK-HA-Mg<sub>2</sub>SiO<sub>4</sub> Composite Material for Spine Implants: Biocompatibility & Imaging Compatibility Assessments

Naresh Kumar (National University Health System, Singapore)

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## MIS

- EPO8-01 Biportal Endoscopic Thoracic Decompression**  
 Seung-Hyun Choi (Busan Korea Hospital, Korea)
- EPO8-02 Factors Affecting Segmental Lordotic Angle in Oblique Lateral Interbody Fusion at L5-S1**  
 Nam-Su Chung (Ajou University Hospital, Korea)
- EPO8-03 Clinical and Radiological Outcomes of Minimally Invasive Oblique Lumbar Interbody Fusion at L5-S1**  
 Hae-Dong Jang (Soonchunhyang University Bucheon Hospital, Korea)
- EPO8-04 Proximity of Endplate on UIV Using Cortical Bone Trajectory Screws Can be a Risk Factor for Early Onset Postoperative Radiologic Adjacent Segment Disease**  
 Junhan Kwon (Yonsei University College of Medicine, Korea)
- EPO8-05 Clinical Outcomes of Biportal Endoscopic Interlaminar Decompression with Oblique Lumbar Interbody Fusion (OLIF): Comparative Analysis with TLIF**  
 Ho-Jin Lee (Chungnam National University College of Medicine, Korea)
- EPO8-06 Radiographic Analysis of Early Changes in Upper Adjacent Segments after Fusion Surgery: OLIF vs PLIF**  
 JooYoung Lee (Dong-A Medical Center, University of Dong-A College of Medicine, Korea)
- EPO8-07 Clinical and Radiologic Outcomes of Biportal Endoscopic Lumbar Discectomy in Obese Patients: A Retrospective Case Control Study**  
 Jun-Young Choi (Dongguk University Ilsan Hospital, Korea)
- EPO8-09 Clinical Outcome of Oblique Lumbar Interbody Fusion with 3D-Printed Titanium Cage**  
 Eugene Park (Kyungpook National University Hospital, Korea)
- EPO8-10 A Beginner's Perspective on Biportal Endoscopic Spine Surgery in Single-Level Lumbar Decompression: A Comparative Study with a Microscopic Surgery**  
 Jeongik Lee (Chung-Ang University Gwangmyeong Hospital, College of Medicine, Chung-Ang University, Korea)

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- EPO8-11**    **Assessment of Adjacent Segment Changes Following Single-Level Oblique Lateral Interbody Fusion (OLIF): Insights from Radiographic Assessment**  
Kaweekrai Anusart (Chulalongkorn University, Thailand)
- EPO8-12**    **Clinical and Radiological Results of Biportal Endoscopic Lumbar Interbody Fusion : More than 2 Year Follow Up**  
Dong Geun Lee (Leon Wiltse Memorial Hospital, Korea)
- EPO8-13**    **Distance from Screwing Point to Spinal Canal and Vertebral Body in Lumbar Spine - Anatomy for Safe Percutaneous Pedicle Screw Insertion**  
Takeshi Aoyama (Teine Keijinkai Hospital, Japan)
- EPO8-14**    **Endoscopic Discectomy for Lumbar Disc Herniation after Decompression Surgery**  
Ji Soo Moon (Daegu Wooridul Spine Hospital, Korea)
- EPO8-15**    **Additional Level Endoscopic Discectomy with One Incision after Diagnostic Selective Nerve Root Block**  
Ji Soo Moon (Daegu Wooridul Spine Hospital, Korea)
- EPO8-16**    **Efficacy of the Erector Spinae Plane Block with Sedation for Unilateral Biportal Endoscopic Spine Surgery and Comparison with Other Anesthetic Methods**  
Tae Hoon Kang (SMG-SNU BRM Medical Center, Korea)
- EPO8-17**    **Awake Unilateral Biportal Endoscopic Thoracic Decompression - Technical Note -**  
Tae Hoon Kang (SMG-SNU BRM Medical Center, Korea)
- EPO8-18**    **Unilateral Biportal Endoscopic Decompression Surgery for Histopathological Diagnosis and Abscess Removal in Spinal Tuberculosis: A Case Series**  
Youngsuk Hwang (Keimyung University Dongsan Hospital, Korea)

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## NAVIGATION & ROBOTICS

- EP09-01 **The Sequence of Oblique Lumbar Interbody Fusion: Reduction First or Cage First?**  
Chang-Min Ha (Samsung Medical Center, Korea)
- EP09-02 **Double Endplates Penetrating Screw Technique and Cross Trajectory Technique Using Robotic Navigation System**  
Sho Fujiwara (Osaka Gyoumeikan Hospital, Japan)

## NON-OPERATIVE CARE

- EP10-01 **The Efficacy of Hyaluronidase in Transforaminal Epidural Steroid Injection**  
Jae Yeun Hwang (Kangnam Sacred Heart Hospital, Hallym University School of Medicine, Korea)

## PEDIATRIC SPINE

- EP11-01 **Vertebral Bone Quality Score as a Novel Predictor of Proximal Junctional Kyphosis after Thoracic Adolescent Idiopathic Scoliosis Surgery**  
Juehan Wang (West China Hospital, China)
- EP11-02 **Principles of Preoperative Diagnostics of Split Cord Malformation and Tethered Cord Syndrome in Children**  
Nodirbek Kadirbekov (Republican Specialized Scientific and Practical Medical Center of Neurosurgery, Uzbekistan)
- EP11-03 **Correction of the Craniospinal Compliance in the Treatment of the Hydrocephalus Combined with the Spinal Hernia**  
Bakhtiyor Talipov (Resident Neurosurgeon, Uzbekistan)

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- EP11-04**    **Assessment of Lumbosacral Angle in Split Cord Malformation and Tethered Cord Syndrome in Children**  
Yugay Igor (Republican Specialized Research and Practical Medical Center for Neurosurgery, Uzbekistan)
- EP11-05**    **Fusion Rates based on Type of Bone Graft Substitute Using Minimally Invasive Scoliosis Surgery for Adolescent Idiopathic Scoliosis**  
Ji Su Kim (Inje University Sanggye Paik Hospital, Korea)
- EP11-06**    **The Role of Rhizotomy in Surgery for Cerebral Palsy in Children**  
Normurod Zekriyayev (Republican Scientific and Practical Medical Center of Neurosurgery, Uzbekistan)

## SPINAL ARTHROPLASTY

- EP12-01**    **Evaluating 5-Year Outcomes of between the Use of Coflex Compared to Stenofix Device as an Adjunct to Decompression for Symptomatic Lumbar Spinal Stenosis**  
Naresh Kumar (National University Health System, Singapore)

## TRAUMA, TUMOR & INFECTION

- EP13-01**    **Trial and Chronic Lumbosacral Epidural Stimulation to Regain Voluntary Motor Control after Complete Motor Paralysis**  
Alena Militskova (Kazan Federal University, Russia)
- EP13-03**    **Lymphatic Vessels: A Neglected Channel in Spinal Infection**  
Jie Liu (The Third Affiliated Hospital, Southern Medical University, China)
- EP13-04**    **Sub-Multivariate Logistic Regression for In-Hospital Patient Falls (Including only Primary Surgery Patients)**  
Han-Bin Jin (National Health Insurance Service Ilsan Hospital, Korea)

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- EP13-05 Surgical Intervention Following Radiotherapy in Spinal Metastases with Intermediate Instability: Risk Factor Analysis Using Multicenter Study Cohort**  
Se-Jun Park (Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea)
- EP13-06 Joystick Reduction and Augmentation with Non-Absorbable Sutures for the Treatment of Fracture Dislocation of Sacrococcygeal Joint: A Case Report**  
Soon Do Wang (Soonchunhyang University Cheonan Hospital, Korea)
- EP13-10 The Importance of Mr-Tractography in the Diagnosis of Spinal Cord Tumors**  
Mansur Aliev (Samarkand State Medical University, Uzbekistan)
- EP13-11 Pseudogout of the Spine Mimicking Infection: A Case Report**  
Jessica Thor (Changi General Hospital, Singapore)
- EP13-12 Unipedicular-Screw Index Vertebra Manipulation Technique for Minimally Invasive Short-Segment Thoracolumbar Fracture Fixation**  
Naresh Kumar (National University Health System, Singapore)
- EP13-13 Implant and Construct Decision Making in Metastatic Spine Tumour Surgery: What Are the Important Factors We Need to Weigh Pre-Operatively?**  
Naresh Kumar (National University Health System, Singapore)
- EP13-14 Selection Criteria for Vertebral Augmentation**  
Sho Fujiwara (Osaka Gyomeikan Hospital, Japan)
- EP13-15 Joystick Reduction and Augmentation with Non-Absorbable Sutures for the Treatment of Fracture Dislocation of the Sacrococcygeal Joint: A Case Report**  
Soon Do Wang (Soonchunhyang University Hospital Cheonan, Korea)

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## VALUE, OUTCOMES & HEALTHCARE ECONOMICS

- EP14-01**    **Significance of Body Mass Index on Thoracic Ossification of the Ligamentum Flavum in a Chinese Population**  
Jialiang Lin (Peking University Third Hospital, China)
- EP14-02**    **Risk Factors for the Occurrence and Severity of Vertebral Fractures in Inflammatory Bowel Disease Patients: A Nationwide Population-Based Cohort Study**  
Geon-U Kim (Eunpyeong St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Korea)
- EP14-03**    **The Effect of Psychological Factors on Post-Surgical Outcomes in Spinal Surgery Patients**  
Koo Yeon Lee (National Health Insurance Service Ilsan Hospital, Korea)
- EP14-04**    **Intraoperative Real-Time Stress in Degenerative Lumbar Spine Surgery: Simultaneous Analysis of Electroencephalography Signals and Heart Rate Variability: A Pilot Study**  
Ji-Won Kwon (Yonsei University College of Medicine, Korea)
- EP14-05**    **Environmental and Lifestyle Factors in Idiopathic Scoliosis - An Integrated Study Using Korea Children and Youth Panel Survey**  
Sahyun Sung (College of Medicine, Ewha Womans University Seoul Hospital, Korea)
- EP14-06**    **Assessment of the Reliability and Validity of the Korean Oswestry Disability Index for Lumbar Spine Surgery Patients**  
Sung Joon Yoon (Soonchunhyang University Cheonan Hospital, Korea)
- EP14-07**    **Factor Analysis Affecting Degree of Depression in Family Caregivers of Patients with Spinal Cord Injury: A Cross-Sectional Pilot Study**  
Kyoung-Tae Kim (School of Medicine, Kyungpook National University, Korea)
- EP14-08**    **Nationwide Sample Data Analysis of Additional Surgery Rate after Anterior or Posterior Cervical Spinal Surgery**  
Woon Tak Yuh (Hallym University Dongtan Sacred Heart Hospital, Korea)



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**EP14-09 Mortality Risk after the First Occurrence of Osteoporotic Vertebral Compression Fractures in the General Population: A Nationwide Cohort Study**

Jong-shin Lee (Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea)

**EP14-10 Does Patient Blood Management Affect Outcomes in Metastatic Spine Tumour Surgery? A Review of Current Concepts**

Naresh Kumar (National University Health System, Singapore)